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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: SANG MIN LEE

Serial No.: 09/940,210

Group Art Unit: 2674

Title: COMPACT KEYBOARD FOR HANDHELD COMPUTER

Examiner: DUC Q DINH

APPELLANT'S BRIEF

This brief is in furtherance of the Notice of Appeal filed in this case on November 30, 2005. This Brief is being filed in response to an office communication dated 6/30/2005. The brief is transmitted in triplicate as required under 37 C.F.R. §1.192(a)) The applicant submits this brief in response to the office communication dated 5/30/2007. The applicant requests one month extension of time. Applicant added the correct status to claims after final office action. Applicant also added appendix for related pleadings and stated none.

07/31/2007 HLE333 00000090 09940210

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CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10

I hereby certify that, on the date shown below, this correspondence is being: Deposited with the United States Postal Service in an envelop addressed to Mail Stop Appeal Brief, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 as express Mail Post Office to Addressee Mailing Label NO. EQ 0558242196

Date:

7/29/07

[Signature]
Signature

I. REAL PARTY INTEREST

The real party in interest in this appeal is the party named in the caption of this brief, **SANG MIN LEE.**

II. RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal, there are no such appeals or interferences

III. STATUS OF CLAIMS

Applicant received a first non-final office action in August of 2001. Applicant amended claims in line with a telephone communication with Examiner 8/28/2001. Claim 2 was allowed. Claim 1 was amended with part of the limitation of claim 2 to place the application in a condition for allowance. Claims 4, 10, and 16 were amended to correct the spelling of LCD. Claims 19-24 was added to reclaim subject matter in claim 1 for a continuation. As result of the claims status are as follows (See Exhibit 1 in the Appendix of claims):

1. (currently amended)
2. (currently amended)
3. (original)
4. (currently amended)
5. (original)
6. (original)
7. (original)
8. (original)

9. (original)
10. (currently amended)
11. (original)
12. (original)
13. (original)
14. (original)
15. (original)
16. (currently amended)
17. (original)
18. (original)
19. (new)
20. (new)
21. (new)
22. (new)
23. (new)
24. (new)

A year later Applicant received a second non-final office action in December 2004. Applicant amended claims in line a telephone communication with Examiner. Examiner and Applicant agreed that claim 1 was distinguished from the prior art Blandenbergl. However, we discussed how claim 7 and 13 had to be amended to further distinguish the application from the Blandenbergl As result of the claims status were as follows (See Exhibit 2 in the Appendix of claims):

STATUS OF CLAIMS AFTER SECOND NON-FINAL ACTION

1. (previously presented)
2. (previously presented)
3. (original)
4. (previously presented)
5. (original)
6. (original)
7. (currently amended)
8. (original)
9. (original)
10. (previously presented)
11. (original)
12. (original)
13. (currently amended)
14. (original)
15. (original)
16. (previously presented)
17. (original)
18. (original)
19. (previously presented)
20. (previously presented)
21. (previously presented)
22. (previously presented)
23. (previously presented)

24. (previously presented)

STATUS OF CLAIMS AFTER FINAL ACTION (Exhibit 3)

1. (previously presented)

2. (previously presented)

3. (original)

4. (previously presented)

5. (original)

6. (original)

7. (currently amended)

8. (original)

9. (original)

10. (previously presented)

11. (original)

12. (original)

13. (currently amended)

14. (original)

15. (original)

16. (previously presented)

17. (original)

18. (original)

19. (previously presented)

20. (previously presented)

21. (previously presented)

22. (previously presented)

23. (previously presented)

24. (previously presented)

IV. STATUS OF AMENDMENTS

As noted above, a year later Applicant received a second non-final office action in December 2004. Applicant amended claims in line a telephone communication with Examiner. Examiner and Applicant agreed that claim 1 was distinguished from the prior art Blandenberg. However, we discussed how claim 7 and 13 had to be amended to further distinguish the application from the Blandenberg. These amendments were discussed on the phone. These amendments were entered.

Applicant received a final office action on 6/30/2005. The examiner raised new issues in this final office action and should not be allowed to do this. Applicant amendments after final rejection were not entered. These arguments are raised below. This office action was not in line with examiner and applicant prior telephone conversation. Additionally, this office action raised issues that were never discussed in the telephone conversation. Claim 13 was rejected under 35 USC 112. I reviewed the specifications and drawings and determined there were typographical errors in the specifications. I provided that explanation to the examiner in a telephone conversation. Applicant amended the specifications because there was a mislabeling on the drawings of 746, 742, 741, 745 and 7A. I felt that arrow A in drawing 7A needed to be clarified. There were typographical errors in specifications which were changed accordingly Page 9 lines 9-29 and page 10 lines 1-8. The claims presented with the response to the final office action are presented below (See exhibit 3). The

claims were not amended. Only the specification was amended to correct 112 rejection. Applicant reasserted the amendments from the prior office action. (See Exhibit 3).

1. (previously presented)
2. (previously presented)
3. (original)
4. (previously presented)
5. (original)
6. (original)
7. (previously presented)
8. (original)
9. (original)
10. (previously presented)
11. (original)
12. (original)
13. (previously presented)
14. (original)
15. (original)
16. (previously presented)
17. (original)
18. (original)
19. (previously presented)
20. (previously presented)

21. (previously presented)

22. (previously presented)

23. (previously presented)

24. (previously presented)

V. SUMMARY OF CLAIMED SUBJECT MATTER

Referring to FIG 1 –3A, page 4 lines 29-37, and page 5 lines 2-29, a description of independent claim 1 is provided. Because independent claim 19 is a broader claim than claim 1, it is also described in the above listed pages. Independent Claim 1 and 19 discloses a handheld computerized device with an attached compact keyboard. In this embodiment of the present invention, the device consists of a keyboard portion and an electronic portion. The keyboard portion and the electronic housing both have a configuration defined by a top edge, bottom edge, top surface, bottom surface, and a pair of side edges. In this embodiment of the present invention, the top edge of the keyboard portion is hingedly connected to the top edge of the electronic housing. A keypad overlays the top surface of the keyboard portion and a display means overlays the top surface of the electronic housing. A microprocessor is situated inside the electronic housing and is electrically connected to keyboard the portion. The hinge connection between the keyboard portion and the electronic housing allows the keyboard portion to pivot from a closed position into an operable position. When in a closed position the keypad and display means are enclosed in a cavity formed by the closure of the keyboard portion against the electronic housing. To pivot into an operable position, the keyboard portion is pivoted 360 degrees around the longitudinal axis of the electronic housing such that the bottom surface of the keyboard portion becomes parallel to the bottom surface of the electronic housing.

Referring to FIG. 6, and page 8 lines 22-29, a description of independent claim 7 is provided. Independent Claim 7 discloses another embodiment of a handheld computerized device with an attached compact keyboard. In this embodiment of the present invention, the bottom surface of the keyboard portion is permanently affixed to the bottom surface of the electronic housing. In this embodiment the handheld device is

fixed in its operable position. A keypad overlay the top surface of the keyboard portion and a display means overlays the top surface of the electronic housing.

Referring to FIG. 7-7C, and page 9 lines 9-29, and page 10 lines 2-11, a description of claim 13 is provided. Claim 13 discloses another embodiment of a handheld computerized device with an attached compact keyboard. In this embodiment of the present invention, the handheld device consists of a sliding bracket having a pair of guide members integrally coupled to the side edges of the electronic housing. The side edges of the keyboard portion are adapted to slide into the guide members. In this embodiment the handheld device is placed in an operable by sliding the keyboard portion with the bottom surface of the keyboard portion parallel to the bottom surface of the electronic housing.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Applicant is requesting a review of the 103 rejections of claims 1, 2, 19-24, and 7, and 8. Additionally, the 112 rejection of claim 13 needs to be reviewed in this appeal.

VII. ARGUMENT

ISSUE 1: 103 REJECTION OF CLAIM INDEPENDENT CLAIM 1, 2, 7, 8, 19-23.

In my final office action response, Applicant reiterated original response per the telephone interview on December 27, 2004 as follows. In his final office action response, Examiner never discussed FIG. 6C of Brandenburg. Per our telephone conversation, Applicant pointed out the significance of FIG. 6C. Brandenburg is provided in Exhibit 4. Regarding claim 1, Applicant and Examiner agreed that Applicant's claimed invention could be distinguished from Blandenberg. Applicant claims:

a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair

*of side edges, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;*

Blandenbergs states:

As device 801 transitions to the open state, display portion 803 hingedly pivots relative to body portion 807 as indicated by arrow 809 in FIG. 6B. In the open state, display screen 815 is adjacent to and visible above thumbboard 805. Fig. 6a shows the closed state and Fig. 6B is still in the closed state to show the transition to FIG. 6C.

As shown in FIG. 6C of Blandenbergs, the invention in the prior art keyboard is adjacent to the keyboard in an open state. Blandenbergs illustrates in FIG. 6A and 6B that bottom surface of the keyboard and display portion are parallel in a closed state.

Applicant claims the electronic housing having the display and the keyboard portion are parallel in an open state. Thus, the Applicant's invention is distinguished from the prior art. As shown in FIG. 'S, 6A, 6B, and 6C, the lower edge of the display is hingedly connected to the top edge of the keyboard housing. As shown in FIG. 1 in the specification, the two top edges are hingedly connected as claimed.

Regarding claim 7, Examiner cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. A factual inquiry whether to combine references must be thorough and searching. A showing of suggestion, teaching or motivation to combine the prior art references is an essential component of an obvious holding. The prior art must suggest a desirability to combine prior art references. (See 277 F3d 1338, 61 USPQ2d 1430 (Fed. Cir 2002)).

Here, examiner noted that Brandenburg does not teach the limitation of the bottom surface being permanently affixed of the keyboard in an operable position. The examiner tried to use Brandenburg to fit the claim limitations of Applicant's invention. However, as noted above Brandenburg does not teach or suggest the configuration as claimed by the applicant. Brandenburg teaches a pivoting of a display into a normal configuration with the display adjacent to the keyboard in an open state. The device in Brandenburg is not hingedly connected as claimed by the Applicant. The hingedly connection between the two top edges facilitates the transitioning of the applicant's device the open state.

Ni illustrates a keyboard affixed to the backside of a notebook computer or gamebox. Ni is new reference traversed by the examiner. Additionally, the Keyboard in Ni is not Parabolic as claimed by the Applicant.

Ni nor Brandenburg discloses hand grips for supporting the hands while typing on the keyboard when the device is in the open state. In Brandenburg in FIG. 6C, a standard keyboard is shown. Thus hand support means on the side is not required. Label 827 in FIG. 6C designates joysticks. By plain definition joysticks are not used

conversation; because these amendments are typographical they could have been taken care of before final office action response. This was never mentioned to me prior to final office action):

- *Labels (746,747) was replaced with 736, 737 to show rib designations. Numerals 746 and 747 were designated as ribs earlier in the application. This is an obvious error that can be amended.*
- *Labels 741 and 742 were changed because their designations are reversed in the drawings. This is an obvious error that can be amended.*
- *More designations were added to FIG. 7A and 7B for clarification and to bring them in line with FIG. 7 and 7C. These designations are taken directly from the drawings 7 and 7C which were disclosed in the original disclosure.*
- *Numeral 765 was changed to 745. Numeral 745 is depicted as bottom surface of the electronic housing in the specifications and drawings. This is an obvious error for amendment.*
- *A description of 7A and 7B was added for clarification for examiner. 7B was changed to 7A. 7A is the closed state. This is an obvious error that can be amended in view of the drawings.*
- *As shown in FIG. 7A, in the closed state the keypad (125) faces the bottom surface of the electronic housing which is also stated in the specifications on Page 10, "After the user is finished using device (700), the keyboard portion (710) is slid into guide members (735, 737) with the keypad (725) facing the bottom surface ~~(765)~~ (745) of electronic housing*

for hand support means. Thus, there is no motivation to combine Ni and Brandenburg. Additionally, it also follows that there is no motivation to combine Makala as well.

Regarding claims 19-24, the above arguments would follow. As explained above claim 19-24 was added to recapture the claim limitation of the original filed application after the first office action. Applicant amended claim 1 to put the application in a condition of allowance.

ISSUE 2: 112 REJECTION OF CLAIM 13

Claim 13 was amended in the final office action to claim an alternative embodiment of claim 1, wherein the invention is slid into an operable position with the bottom surface of electronic housing (720) and keyboard portion (710) in a parallel position. (See Page10 lines 3-5 and FIG. 7C).

The specifications do more than just mention operable versus closed state. Page 9 lines 9-29 and page 10 lines 1-8 disclose the full process of how the embodiment of claim 13 functions. There are some typographical errors between the FIG.'S 7A-7C and the specifications. The disclosure can be amended to matter that is inherently disclosed by the original application. *(See In re Smyte, 480 F.2d 1376, 178 USPQ 279 (C.C.P.A))* As a result, applicant has amended the specifications to be in line with the drawings which are part of the original disclosure. Examiner alleges that the specifications fail to convey to one skilled in the art. Applicant has amended FIG 7A and 7B with labels in line with FIG 7 and FIG. 7C. Applicant provided original drawing of FIG. 7C with response to Office Action for clarification. The specification was amended as follows (Please note that examiner and applicant discussed these changes in a telephone

(720)” As shown in the operable state in FIG. 7B, keypad 125 does not face the bottom surface of the electronic housing. However, Applicant can change wording to state a parallel configuration which is also depicted in FIG. 7A if required by the examiner.

Drawings are considered part of the specifications. *(See Was-Cath, Inc v. Mahurkar, 935 F2d 1555, 19 USPQ2d 1111, 1118 (Fed. Cir. 1991)).* Fig.’s 7A-7C illustrates the configuration of operable and closed state of this embodiment of the present invention. The language of claim 13 comes directly from the specifications in conjunction with the drawings. It is not clear what examiner means by the specification do not reasonably convey to one skilled in the art. Clarification is required because the drawings are clear. The description does not require literal support for the claimed invention. The disclosure should convey the concept that is claimed. *(See Ex Parte Parks 30 USPQ2d 1234, 1246-27 (B.P.A.I 1993))*

Here, the drawings do provide the concept of the claimed invention. The changes to the specifications to bring them in line with drawings are appropriate changes.

Applicant ask board to take note that the first examiner allowed the claims and the applicant amended in line with the first office action. See Office Action in Exhibit 5. Additionally, it took the patent office another year to respond and reject the claims. See Exhibit 6. Blandenburg does not function as the applicant invention.

VIII. APPENDIX A OF CLAIMS INVOLVED IN THIS APPEAL

Exhibit 1 – First non-final Office Action amendment with claims

Exhibit 2- Second non-final Office Action Amendment with Claims

Exhibit 3- Final Office Action Response with Claims

IX. EVIDENCE APPENDIX B

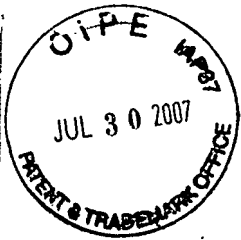
Exhibit 4 – Brandenburg Patent with drawings at issue

Exhibit 5 – First Non-final Office Action

Exhibit 6—Second non-final office action

IX. RELATED PROCEEDINGS APPENDIX

NONE.



Exh. 6. + 1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF : SANG MIN LEE

Serial No.: 09/940,210

Filed: 08/28/2001

Group Art Unit: 2674

Title: COMPACT KEYBOARD FOR HANDHELD COMPUTER

Examiner: Francis Nguyen

AMENDMENT

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Honorable Sir:

This amendment is filed in response to the office action dated August 28, 2001.

IN THIS CLAIMS

1. (currently amended): A handheld computerized device comprising:
 - a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base; an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;
 - a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands

are supported while the user is typing on the keypad;

a means for displaying data overlaying the top surface of the electronic housing; and

a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby data entered at the keypad is transmitted to the processor and displayed by the display means[.];

a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;

the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

2. (currently amended): The device recited in Claim 1, wherein the keypad further comprises:
[a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;]
the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.
3. (original): The device recited in Claim 1, wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
4. (currently amended): The device recited in Claim 3 wherein the display area is a Liquid [Crystals] Crystal Display (LCD).
5. (original): The device recited in Claim 3, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and

a means for electrically connecting the plurality of alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

6. (original): The device recited in Claim 1, further comprising:

a pressure sensitive writing means for allowing data to be inputted via handwriting; and
the pressure sensitive writing means overlapping the bottom edge of the display area.

7. (original): A handheld computerized device comprising:

a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;

an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard portion;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;

a means for displaying data overlaying the top surface of the electronic housing; and

a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.

8. (original): The device recited in Claim 7, wherein the keypad further comprises:

a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;

the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and

the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

9. (original): The device recited in Claim 7, wherein the display means further comprises:

a display area defined by a top edge, bottom edge, and a pair of side edges;

a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.

10. (currently amended): The device recited in Claim 9 wherein the display area is a Liquid [Crystals] Crystal Display (LCD).
11. (original): The device recited in Claim 10, wherein the bottom strip and each side strip of the front panel further comprises:
 - a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
 - a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
12. (original): The device recited in Claim 7, further comprising:
 - a pressure sensitive writing means for allowing data to be inputted via handwriting; and
 - the pressure sensitive writing means overlapping the bottom edge of the display area.
13. (original): A handheld computerized device comprising:
 - a sliding bracket having a pair of guide members;
 - a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being adapted to slide into the pair of guide members, the keypad overlaying the top surface of the support base;
 - an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being integrally coupled to the pair of guide members;
 - a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
 - a means for displaying data overlaying the top surface of the electronic housing; and
 - a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.

14. (original): The device recited in Claim 13, wherein the keypad further comprises:
- a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
 - the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
 - the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
 - the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand;
15. (original): The device recited in Claim 13, wherein the display means further comprises:
- a display area defined by a top edge, bottom edge, and a pair of side edges;
 - a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
 - each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
16. (currently amended): The device recited in Claim 15 wherein the display area is a Liquid [Crystals] Crystal Display (LCD).
17. (original): The device recited in Claim 15, wherein the bottom strip and each side strip of the front panel further comprises:
- a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
 - a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
18. (original): The device recited in Claim 13, further comprising:
- a pressure sensitive writing means for allowing data to be inputted via handwriting; and
 - the pressure sensitive writing means overlapping the bottom edge of the display area.
19. (new): A handheld computerized device comprising:
- a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;

an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad; and

20. (new): The device recited in Claim 19, wherein the keypad further comprises:

a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;

the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and

the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

21. (new): The device recited in Claim 19, wherein the display means further comprises:

a display area defined by a top edge, bottom edge, and a pair of side edges;

a front panel surrounding the display area and being defined by a top strip, a bottom strip, securely attached to each corresponding strip of the display area.

22. (new): The device recited in Claim 19, wherein the display area is a Liquid Crystal Display (LCD).

23. (new): The device recited in Claim 19, wherein the bottom strip and each side strip of the front panel further comprises:

a plurality of additional alphanumeric keys each adapted to generate a character signal

upon depression thereof; and

a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

24. (new): The device recited in Claim 1, ~~4~~ further comprising:

a pressure sensitive writing means for allowing data to be inputted via handwriting; and
the pressure sensitive writing means overlapping the bottom edge of the display area.

REMARKS

AMENDMENTS

1. REGARDING CLAIMS 4, 10, and 16

The word **CRYSTALS** is misspelled. The correct interpretation of **LCD** is Liquid Crystal Display. Each claim was corrected accordingly.

2. REGARDING CLAIMS 1 AND 2

Per our telephone interview, in order to place claims 1-6 in a condition for allowance, the first two limitations of claim 2 was moved up into claim 1. The last two claim limitations were remained in claim 2.

ARGUMENTS

3. REGARDING ORIGINAL CLAIM 1

Genest discloses a latch and a hook to fasten the two portions of the handheld device together. Fastening means is normally defined as some type of structure that holds two separate structures together such as screw or latch and a hook. The applicant's claim invention discloses a hand support means for supporting the left and right hand while typing on the keypad. When the word "whereby" and its accompanying phrase set forth a structural limitation for the invention recited in the claim, the word "whereby" and the accompanying phrase will be considered a positive limitation of the claim and thereby limit the claim accordingly. (See *Scheinman v Zalkind*, 112 F.2d 1017, 1019, 46 USPQ 141, 143 (C.C.P.A 1940)). The Genest disclosed fastening means does not provide a structure to for hand support means. Your fingers are required to connect and dislodge the latch and hook. However, technically the fastener does not provide hand support. The applicant describes hand support means as a structure required to support the hands during typing. (See Page 8 Lines 23-29 and Page 9 Lines 1-5 in the specifications) The Genest disclosed fastening means is not structurally or functionally equivalent to the disclosed hand support means. Since the Genest disclosed fastening means is not an

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ON RE APPLICATION OF: SANG MIN LEE

Serial No.: 09/940,210

Group Art Unit: 2674

Title: COMPACT KEYBOARD FOR HANDHELD COMPUTER

Examiner: DUC Q DINH

AMENDMENT

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Honorable Sir:

This amendment is filed in response to the office communication dated 3/3/2005. I have added claims 19-24. I have enclosed the fee for \$5.00.

IN THE CLAIMS

1. (Previously Presented) A handheld computerized device comprising:
- a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
 - an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;
 - a pair of hand support means being securely attached at an ergonomic position along

Adjustment date: 03/25/2005 SSESHE1
01/07/2005 AWONDAF1 00000002 09940210
01 FC:1999 -55.00 DP

03/25/2005 SSSESHE1 00000010 09940210
01 FC:2251 60.00 OP

each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
a means for displaying data overlaying the top surface of the electronic housing; and
a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby data entered at the keypad is transmitted to the processor and displayed by the display means; and
a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

2. (Previously Presented) The device recited in Claim 1, wherein the keypad further comprises:

~~a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;~~
~~the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;~~
the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

3. (original) The device recited in Claim 1, wherein the display means further comprises:

a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.

4. (Previously Presented) The device recited in Claim 3 wherein the display area is a Liquid ~~Crystals~~ Crystal Display (LCD).

5. (original) The device recited in Claim 3, wherein the bottom strip and each side strip of the front panel further comprises:
- a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
 - a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
6. (original) The device recited in Claim 1, further comprising:
- a pressure sensitive writing means for allowing data to be inputted via handwriting;
 - and
 - the pressure sensitive writing means overlapping the bottom edge of the display area.
7. (currently amended) A handheld computerized device comprising:
- a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
 - an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard portion in an operable position;
 - a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
 - a means for displaying data overlaying the top surface of the electronic housing; and
 - a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.
8. (original) The device recited in Claim 7, wherein the keypad further comprises:
- a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
 - the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

9. (original) The device recited in Claim 7, wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
10. (Previously Presented) The device recited in Claim 9 wherein the display area is a Liquid ~~Crystals~~ Crystal Display (LCD).
11. (original) The device recited in Claim 10, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
12. (original) The device recited in Claim 7, further comprising:
a pressure sensitive writing means for allowing data to be inputted via handwriting;
and
the pressure sensitive writing means overlapping the bottom edge of the display area.
13. (currently amended) A handheld computerized device comprising:
a sliding bracket having a pair of guide members;
a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being adapted to slide into the pair of guide members in an operable state or in a closed state, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being integrally coupled to the pair of guide members;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;

in the operable state, the side edges of the support base are adapted to slide into the guide members such that the bottom surface of the support base and the bottom surface of the electronic housing are parallel to each other;

in the closed state, the side edges of the support base are adapted to slide into the guide members such that the keypad faces the top surface of the electronic housing;

a means for displaying data overlaying the top surface of the electronic housing; and

a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.

14. (original) The device recited in Claim 13, wherein the keypad further comprises:

a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;

the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and

the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand;

15. (original) The device recited in Claim 13, wherein the display means further comprises:

a display area defined by a top edge, bottom edge, and a pair of side edges;

a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and

each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.

16. (Previously Presented) The device recited in Claim 15 wherein the display area is a Liquid ~~Crystals~~ Crystal Display (LCD).

17. (original) The device recited in Claim 15, wherein the bottom strip and each side strip of the

front panel further comprises:

a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and

a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

18.(original) The device recited in Claim 13, further comprising:

a pressure sensitive writing means for allowing data to be inputted via handwriting;
and

the pressure sensitive writing means overlapping the bottom edge of the display area.

19. (Previously Presented) A handheld computerized device comprising:

a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;

an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad.

20. (Previously Presented): The device recited in Claim 19, wherein the keypad further comprises:

a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas,

the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and

the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

21. (Previously Presented) The device recited in Claim 19 wherein the display means further comprises:

- a display area defined by a top edge, bottom edge, and a pair of side edges;

- a front panel surrounding the display area and being defined by a top strip, a bottom strip, securely attached to each corresponding strip of the display area.

22. (Previously Presented): The device recited in Claim 21 wherein the display area is a Liquid Crystal Display (LCD).

23. (Previously Presented): The device recited in Claim 21 wherein the bottom strip and each side strip of the front panel further comprises:

- a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof;

- a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

24. (Previously Presented) The device recited in Claim 19 further comprising :

- a pressure sensitive writing means for allowing data to be inputted via handwriting; and the pressure sensitive writing means overlapping the bottom edge of the display area.

IN THE CLAIMS**1. (Previously Presented) A handheld computerized device comprising:**

a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;

an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;

a means for displaying data overlaying the top surface of the electronic housing; and
a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby data entered at the keypad is transmitted to the processor and displayed by the display means; and

a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;

the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

2. (Previously Presented) The device recited in Claim 1, wherein the keypad further comprises:

~~a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;~~

~~the first and the second section lying co-planar vertically parallel along the top surface~~

~~of the support base of the keyboard portion;~~

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and

the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

3. (original) The device recited in Claim 1, wherein the display means further comprises:
 - a display area defined by a top edge, bottom edge, and a pair of side edges;
 - a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
 - each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
4. (Previously Presented) The device recited in Claim 3 wherein the display area is a Liquid ~~Crystals~~ Crystal Display (LCD).
5. (original) The device recited in Claim 3, wherein the bottom strip and each side strip of the front panel further comprises:
 - a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
 - a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
6. (original) The device recited in Claim 1, further comprising:
 - a pressure sensitive writing means for allowing data to be inputted via handwriting;
 - and
 - the pressure sensitive writing means overlapping the bottom edge of the display area.
7. (currently amended) A handheld computerized device comprising:
 - a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
 - an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard portion in an operable position;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
a means for displaying data overlaying the top surface of the electronic housing; and
a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.

8. (original) The device recited in Claim 7, wherein the keypad further comprises:
 - a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
 - the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
 - the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
 - the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.
9. (original) The device recited in Claim 7, wherein the display means further comprises:
 - a display area defined by a top edge, bottom edge, and a pair of side edges;
 - a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
 - each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
10. (Previously Presented) The device recited in Claim 9 wherein the display area is a Liquid Crystals Crystal Display (LCD).
11. (original) The device recited in Claim 10, wherein the bottom strip and each side strip of the front panel further comprises:
 - a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
 - a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

12. (original) The device recited in Claim 7, further comprising:

a pressure sensitive writing means for allowing data to be inputted via handwriting;

and

the pressure sensitive writing means overlapping the bottom edge of the display area.

13. (currently amended) A handheld computerized device comprising:

a sliding bracket having a pair of guide members;

a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being adapted to slide into the pair of guide members in an operable state or in a closed state, the keypad overlaying the top surface of the support base;

an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being integrally coupled to the pair of guide members;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;

in the operable state, the side edges of the support base are adapted to slide into the guide members such that the bottom surface of the support base and the bottom surface of the electronic housing are parallel to each other;

in the closed state, the side edges of the support base are adapted to slide into the guide members such that the keypad faces the top bottom surface of the electronic housing

a means for displaying data overlaying the top surface of the electronic housing; and

a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.

14. (original) The device recited in Claim 13, wherein the keypad further comprises:

a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;

the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand;

- 15.(original) The device recited in Claim 13, wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
- 16.(Previously Presented) The device recited in Claim 15 wherein the display area is a Liquid Crystals Crystal Display (LCD).
- 17.(original) The device recited in Claim 15, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
- 18.(original) The device recited in Claim 13, further comprising:
a pressure sensitive writing means for allowing data to be inputted via handwriting;
and
the pressure sensitive writing means overlapping the bottom edge of the display area.
19. (Previously Presented) A handheld computerized device comprising:
a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the

bottom surface of the electronic housing is parallel to the bottom surface of the support base;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad.

20. (Previously Presented): The device recited in Claim 19, wherein the keypad further comprises:
- a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas,
 - the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
 - the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
 - the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.
21. (Previously Presented) The device recited in Claim 19 wherein the display means further comprises:
- a display area defined by a top edge, bottom edge, and a pair of side edges;
 - a front panel surrounding the display area and being defined by a top strip, a bottom strip, securely attached to each corresponding strip of the display area.
22. (Previously Presented): The device recited in Claim 21 wherein the display area is a Liquid Crystal Display (LCD).
23. (Previously Presented): The device recited in Claim 21 wherein the bottom strip and each side strip of the front panel further comprises:
- a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof;
 - a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
24. (Previously Presented) The device recited in Claim 19 further comprising :
- a pressure sensitive writing means for allowing data to be inputted via handwriting; and
 - the pressure sensitive writing means overlapping the bottom edge of the display area.

ARGUMENTS

I am reiterating my original response per our telephone interview on December 27, 2004 as follows. In his response, Examiner never discussed FIG. 6C of Brandenburg. Per our telephone conversation, I pointed out the significance of FIG. 6C.

Regarding claim 1, we agreed that Applicant's claimed invention could be distinguished from Blandenbergl. Applicant claims:

a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;

Blandenbergl states:

As device 801 transitions to the open state, display portion 803 hingedly pivots relative to body portion 807 as indicated by arrow 809 in FIG. 6B. In the open state, display screen 815 is adjacent to and visible above thumbboard 805. Fig. 6a shows the closed state and Fig. 6B is still in the closed state to show the transition to FIG. 6C.

As shown in FIG. 6C, the invention in the prior art keyboard is adjacent to the keyboard in an open state. The prior illustrates in FIG. 6A and 6B that bottom surface of the keyboard and display portion are parallel in a closed state. However, applicant claims the electronic housing

having the display and the keyboard portion are parallel in an open state. Thus, the Applicant's invention is distinguished from the prior art. As shown in FIG.'S, 6A, 6B, and 6C, the lower edge of the display is hingedly connected to the top edge of the keyboard housing. As shown in FIG. 1 in the specification, the two top edges are hingedly connected as claimed.

Regarding independent claim 7, claim 7 was amended to claim an alternative embodiment of claim 1, wherein the invention is affixed into an operable position with the bottom surface of electronic housing (620) and keyboard portion (610) in a parallel position. (See Page 8 line 8-16 and FIG. 6)

Regarding independent claim 13, claim 13 was amended to claim an alternative embodiment of claim 1, wherein the invention is slid into an operable position with the bottom surface of electronic housing (720) and keyboard portion (710) in a parallel position. (See Page10 lines 3-5 and FIG. 7C).

112 REJECTION OF CLAIM 13

The specifications do more than just mention operable versus closed state. The Page 9 lines 9-29 through page 10 lines 1-8 discloses the full process. There are some typographical errors between the FIG.'S 7A-7C and the specifications. The disclosure can be amended to matter that is inherently disclosed by the original application. (*See In re Smyte, 480 F.2d 1376, 178 USPQ 279 (C.C.P.A.)*) As a result, applicant has amended the specifications to be in line with the drawings which are part of the original disclosure. Examiner alleges that the specifications fail to convey to one skilled in the art. Applicant has amended FIG 7A and 7B with labels in line with FIG 7 and FIG. 7C. Applicant has provided FIG. 7C for clarification. The specification was amended as follows (Please note that examiner and applicant discuss

these changes in a telephone conversation; these amendments could have been taken care of before final office action response):

- label (746,747) was replaced with 736, 737 to show rib designations. 746, 747 was designated as ribs earlier in the application. This is an obvious error that can be amended.
- labels 741 and 742 was changed because their designation are reversed in the drawings. This is an obvious error that can be amended.
- More designations were added to FIG. 7A and 7B for clarification and to bring them in line with FIG. 7 and 7C. These designations are taken directly from the drawings 7 and 7C which were disclosed in the original disclosure.
- 765 was changed to 745. 745 is depicted as bottom surface of the electronic housing in the specifications and drawings. This is an obvious error for amendment.
- a description of 7A and 7B was added for clarification for examiner. 7B was changed to 7A. 7A is the closed state. This is an obvious error that can be amended in view of the drawings.
- Claim 13 was amended for examiner clarification. As shown in FIG. 7A, in the closed state the keypad (125) faces the bottom surface of the electronic housing which is also stated in the specifications on Page 10, *"After the user is finished using device (700), the keyboard portion (710) is slid into guide members (735, 737) with the keypad (725) facing the bottom surface ~~(765)~~ (745) of electronic housing (720)"* As shown in the operable state in FIG. 7B, keypad 125 does not face the bottom surface of the electronic housing. However,

Applicant can change wording to state a parallel configuration which is also depicted in FIG. 7A if required by the examiner.

Drawings are considered part of the specifications. (*See Was-Cath, Inc v. Mahurkar, 935 F2d 1555, 19 USPQ2d 1111, 1118 (Fed. Cir. 1991)*). Fig.'s 7A-7C illustrates the configuration of operable and closed state of this embodiment of the present invention. The language of claim 13 comes directly from the specifications in conjunction with the drawings. It is not clear what examiner means by the specification do not reasonably convey to one skilled in the art. Clarification is required because the drawings are clear. The description does not require literal support for the claimed invention. The disclosure should convey the concept that is claimed. (*See Ex Parte Parks 30 USPQ2d 1234, 1246-27 (B.P.A.I 1993)*) *Here, the do drawings provide the concept of the claimed invention.*

103 REJECTIONS

Examiner cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. A factual inquiry whether to combine references must be thorough and searching. A showing of suggestion, teaching or motivation to combine the prior art references is an essential component of an obvious holding. The prior art must suggest a desirability to combine prior art references. (See 277 F3d 1338, 61 USPQ2d 1430 (Fed. Cir 2002)).

Here, the examiner tried to use Brandenburg to fit the claim limitations of Applicant. However, Brandenburg does not teach or suggest the configuration as claimed by the applicant. Brandenburg teaches a pivoting of a display into a normal configuration with the display adjacent to the keyboard in an open state. The device in Brandenburg is not hingedly

connected as claimed by the Applicant. The hingedly connection between the two top edges facilitates the transitioning of the applicant's device the open state.

Ni illustrates a backside keyboard for a notebook computer or gamebox. Ni is new reference traversed by the examiner. Additionally, the Keyboard in Ni is not Parabolic and is not hingedly connected as claimed by the Applicant.

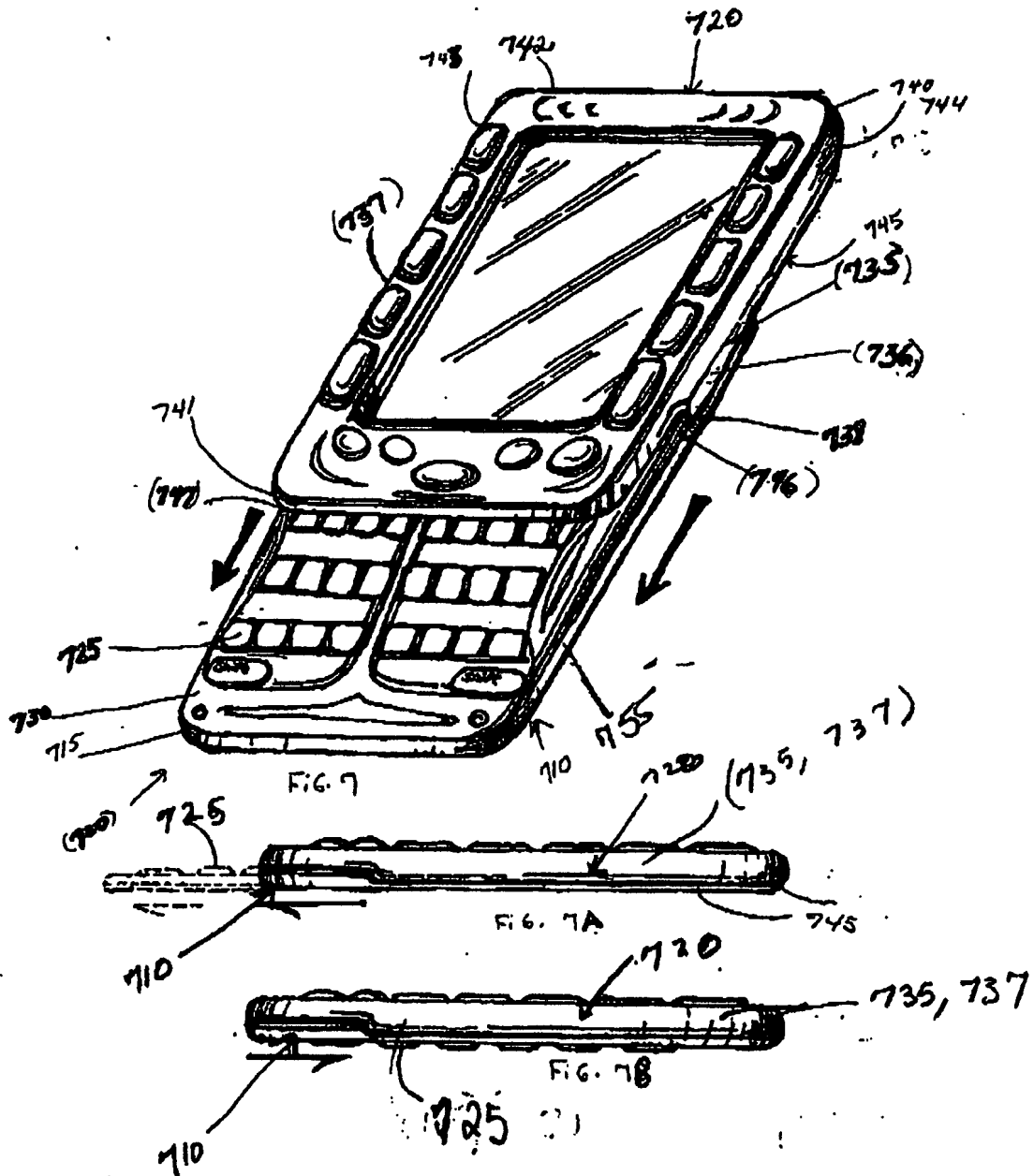
Ni nor Brandenburg discloses hand grips for supporting the hands while typing on the keyboard when the device is in the open state. In Brandenburg in FIG. 6C, a standard keyboard is shown. Thus hand support means on the side is not required. Label 827 in FIG. 6C designates joysticks. By plain definition joysticks are not used for hand support means. Thus, there is no motivation to combine Ni and Brandenburg. Additionally, it also follows that there is no motivation to combine Makala as well.

Examiner is reminded that Applicant has amended independent claims 7 and 13 to further distinguish with the prior art. In view of the above amendments to independent claims 7 and 13 and supporting argument to claim 1, Applicant respectfully requests that the rejections to the supporting dependent claims be withdrawn. Alternately should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, he/she is invited to telephone the undersigned.

Respectfully submitted:


Delphine M. James

Replacement
Sheet



Replacement
Sheet

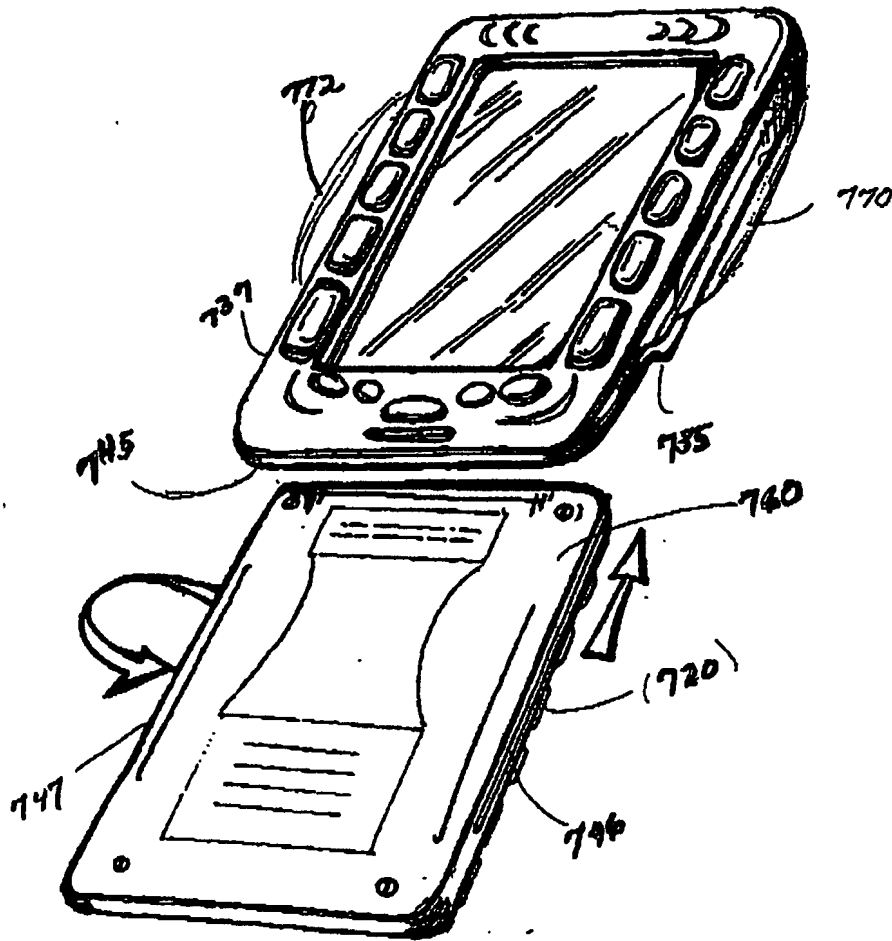


FIG. 7C

Office Action Summary

Application No.

09/940,210

Applicant(s)

LEE, SANG MIN

Examiner

FRANCIS NGUYEN

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
 Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) NONE is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9-13 and 15-18 is/are rejected.
- 7) ☐ Claim(s) 2,8 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Draft

5850

703-746-7850

STraight To
Computer

DETAILED ACTION

Claim Objections

1. Claims 4, 10, 16 are objected to because of the following informalities: incorrect word "Crystals" in claim 4(page 4, line 5), claim 10(page 13, line 16), claim 16 (page 14, line 29).

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-7, 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Genest et al. (US Patent 6,480,377) in view of Price et al. (US Patent 6,377,444).

→ 0.17
1 (original)
copy

As to claim 1) Genesis et al. teaches a handheld computerized device (handheld computer 12 shown in figure 1, column 7, lines 50-54) comprising:

a keyboard portion having a support base and a keypad (keyboard 20 and support base shown in figure 1, column 7, lines 34-36, plurality of individual keys 58 shown in figure 3),
an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base (housing of handheld computer 12 shown in figure 1, hinge structure 17, column 7, lines 15-16)

Art Unit: 2674

a pair of hand support means (latch hook 60 and hook receiving member 62, column 14, lines 28-32)

a means for displaying data (screen 32, column 8, lines 12-14)

a processor situated within the electronic housing (computer processor 30, column 8, lines 1-3)

However, Genest et al. fails to teach electronic housing pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base. Price et al. teaches hinged housings for electronic devices (see abstract), with first body portion and second body portion for rotation at an angle greater than 180 degrees from the mounting surface (column 3, lines 15-18) . It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of Genest et al. then modify the electronic housing to pivot from a closed position to an open position for more than 180 degrees as taught by Price et al. to obtain the apparatus Genest et al. modified by Price et al. because it would allow user to have multiple configurations , as taught by Price et al.

(column 5, lines 35-36).

*Teaches rotating → (affixed)
into multiple into a
config configuration*

As to claim 3, the device recited in claim 1, wherein the display means further comprises: a display area defined by a top edge, bottom edge, and a pair of side edges (Genest et al., screen 32, column 8, lines 3-4) ; a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and each edge of the display lying adjacent to and being securely attached to each corresponding strip of the display area (inherent on front side 26 shown on figure 1, for supporting LCD screen 32).

As to claim 4, the device recited in claim 3 wherein the display area is a Liquid Crystal Display (Genest et al., column 8, lines 13-14).

As to claim 5, the device recited in claim 3, wherein the bottom strip and each side strip of the front panel further comprises a plurality of additional alphanumeric keys (Genest et al., keys 58 and switches 56, column 11, lines 7-8) each adapted to generate a character signal upon depression thereof; and a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor (data port and data connector, column 11, lines 13-15) .

As to claim 6, the device recited in claim 1, further comprising a pressure sensitive writing means for allowing data to be inputted via handwriting (Genest et al., column 8, lines 15-17 column 11, lines 58-64).

As to claim 7, Genesis et al. teaches a handheld computerized device (handheld computer 12 shown in figure 1, column 7, lines 50-54) comprising:

a keyboard portion having a support base and a keypad (keyboard 20 and support base shown in figure 1, column 7, lines 34-36) plurality of individual keys 58 shown in figure 3),

an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges (housing of handheld computer 12 shown in figure

1)

Art Unit: 2674

a pair of hand support means (latch hook 60 and hook receiving member 62, column 14, lines 28-32) *next 9 claim limitation*

a means for displaying data (screen 32, column 8, lines 12-14)

a processor situated within the electronic housing (computer processor 30, column 8, lines 1-3)

However, Genest et al. fails to teach bottom surface of the electronic housing being securedly attached to the bottom surface of the keyboard portion . Note that Genest et al. does teach a hinge structure 17 (column 7, lines 15-16); this would allow pivoting. It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of Genest et al. then make use of the hinge for pivoting resulting in bottom surface of the electronic housing attached to the bottom surface of the keyboard portion to obtain the apparatus Genest et al. modified because it would allow different configurations for user. *(3)*

As to claim 9, the device recited in claim 7, wherein the display means further comprises: a display area defined by a top edge, bottom edge, and a pair of side edges (Genest et al., screen 32, column 8, lines 3-4) ; a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and each edge of the display lying adjacent to and being securely attached to each corresponding strip of the display area (inherent on front side 26 shown on figure 1, for supporting LCD screen 32).

As to claim 10, the device recited in claim 7 wherein the display area is a Liquid Crystal Display (Genest et al., column 8, lines 13-14).

As to claim 11, the device recited in claim 9, wherein the bottom strip and each side strip of the front panel further comprises a plurality of additional alphanumeric keys (Genest et al., keys 58 and switches 56, column 11, lines 7-8) each adapted to generate a character signal upon depression thereof; and a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor (data port and data connector, column 11, lines 13-15) .

As to claim 12, the device recited in claim 7, further comprising a pressure sensitive writing means for allowing data to be inputted via handwriting (Genest et al., column 8, lines 15-17 column 11, lines 58-64).

Claims 13, 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Genest et al. (US Patent 6,480,377) in view of Allgeyer et al. (US Patent 6,477,042)

As to claim 13, Genesis et al. teaches a handheld computerized device (handheld computer 12 shown in figure 1, column 7, lines 50-54) comprising:

a keyboard portion having a support base and a keypad (keyboard 20 and support base shown in figure 1, column 7, lines 34-36) plurality of individual keys 58 shown in figure 3),

an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges (housing of handheld computer 12 shown in figure 1)

a pair of hand support means (latch hook 60 and hook receiving member 62, column 14, lines 28-32)

a means for displaying data (screen 32, column 8, lines 12-14)

a processor situated within the electronic housing (computer processor 30, column 8, lines 1-3)

However, Genest et al. fails to teach sliding brackets having a pair of guide members. Allgeyer et al. teaches a sliding bracket with rails (column 11, lines 55-57). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of Genest et al. then make use of sliding brackets with guide members as taught by Allgeyer to obtain the apparatus Genest et al. modified by Allgeyer et al. because it would allow ease of assembling/disassembling , as taught by Allgeyer (column 11, lines 56-57) and also user can easily change configuration.

As to claim 15, the device recited in claim 13, wherein the display means further comprises: a display area defined by a top edge, bottom edge, and a pair of side edges (Genest et al., screen 32, column 8, lines 3-4) ; a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and each edge of the display lying adjacent to and being securely attached to each corresponding strip of the display area (inherent on front side 26 shown on figure 1, for supporting LCD screen 32).

As to claim 16, the device recited in claim 15 wherein the display area is a Liquid Crystal Display (Genest et al., column 8, lines 13-14).

As to claim 17, the device recited in claim 15, wherein the bottom strip and each side strip of the front panel further comprises a plurality of additional alphanumeric keys (Genest et al., keys

58 and switches 56, column 11, lines 7-8) each adapted to generate a character signal upon depression thereof; and a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor (data port and data connector, column 11, lines 13-15) .

As to claim 18, the device recited in claim 13, further comprising a pressure sensitive writing means for allowing data to be inputted via handwriting (Genest et al., counn 8, lines 15-17 column 11, lines 58-64).

Allowable Subject Matter

4. Claims 2, 8 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. *what about other limitations*

The following is a statement of reasons for the indication of allowable subject matter: As to claims 2, 8 and 14, none of prior art teaches the first section of a keypad arranged in the standard QWERTY keyboard for the left hand, the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

CONCLUSION

5. The prior art made of record not relied upon is pertinent to applicant's disclosure

US Patent Susel 6,111,527

US Patent Tzeng 6,431,776

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service whose telephone number is
(703) 306-0377.

May 16th, 2003



FRANCIS N NGUYEN
Examiner
Art Unit 2674

Office Action Summary

Application No.

09/940,210

Applicant(s)

LEE, SANG MIN

Examiner

DUC Q. DINH

Art Unit

2674

Exhibit 6

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2005.
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-24 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

* pull Ni
*(6,297,752)

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

1. This is response to the Amendment filed on March 23, 2005.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 13-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amended claim 13 recites the limitation "in the closed state, the side edges of the support base are adapted to slide into the guide members such that the keypad faces the top surfaces of the electronic housing". Although the specification page 9-10 does mention the arrangement of the electronic device, there is no support in the specification for the quoted limitation above. The examiner examines the application based on best understood of the claimed language.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandenburg et al. (U. S. Patent No. 6,665,173), hereinafter Brandenburg.

In reference to claim 1, Brandenburg discloses in Fig. 6 a handheld computer comprising: keyboard portion 807 having support base and a thumbboard 805 (corresponding to the keyboard) defined by a top surface, a bottom surface, a rear edge, a front edge and a pair of side edges, the thumb board overlaying the top surface of the support base as claimed. An electronic housing 801 having the same structure with the keyboard portion as shown in Fig. 6A. Fig. 6B shows the coupling structure of the keyboard portion and the display portion in an open or closed position such that the bottom surface of the electronic housing is parallel to the bottom surface of the support base as claimed (col. 11, lines 35-53). The device specifically comprising (1) an alphanumeric data input device, such as a full QWERTY-type keyboard or thumb board; (2) a display device, such as an LCD, LED... display screen; (3) a processor; (4) a power source... and (6) a physical housing that contains these components (corresponding to the electronic housing) and that consists of at least two discrete portions that may translate, rotate and/or pivot relative to one another, one portion containing a display device and one portion containing a keyboard (col. 7 line 60 – col. 8 line 5). Fig. 7D show a keyboard having first and second section having plurality of key and being in the form of complementary symmetrical and vertically parallel with the top surface of the keyboard portion.

*Examiner
joels
to address
Fig
6.C
in
Response.*

In addition, Brandenburg discloses that the system also has a plurality of raised grips 621 (corresponding to the hand support means) may be integrated into protective bumpers 619 to facilitate handling of and interaction with device 601. However, Blandenberg does not disclose the raised grips being attached to a side edge of the display portion of the device. Fig. 5 shows

and touch pad on the backside of the device. The touch pad is located such that it can be utilized by the user while the device is in either closed state or open state (col. 11, lines 16-34)

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to provide the grips of the system to provide the user hand support while using the touchpad in the back of the display as shown in Fig. 5B or holding the device while typing on the keyboard as shown in Fig. 4.

In reference to claim 2, Fig. 7 shows the appropriate standard QWERTY keyboard format on the left and right hand as claimed.

In reference to claims 3, and 21, Fig. 6 A and 6C show the strips surrounding the display which carries the additional input device such as joystick for the system as claimed.

In reference to claims 4 and 22, see the rejection of claim 1 for the LCD display as claimed.

In reference to claims 19 and 20, refer to the rejection as applied to claim 1.

6. Claims 7-10 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blandenburg in view of Ni (U. S. Patent No. 6,297,752).

In reference to claim 7, refer to the rejection as applied to claim 1. However, Blandenburg does not disclose, the bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard in an operable position. Ni discloses a backside keyboard for a notebook having bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard as claimed.

It would have been obvious for one of ordinary skill in the art at the time of the invention
was made to learn the teaching of Ni, i.e., the bottom surface of the electronic housing being
securely attached to the bottom surface of the keyboard in an operable position, so that the user
has the same feel of location that occurs when the keyboard is on the top surface of the chassis
thereby eliminating the strain caused by twisting the wrist to type in the state of the art (col. 2,
lines 5-8).

In reference to claims 8-9, refer to the rejection as applied to claims 1-3.

In reference to claim 10, refer to the rejection as applied to claim 4.

In reference to claims 13 and 14, refer to the rejection of claim 1. In addition, Fig. 1-3
show an embodiment in which the keyboard portion and the display portion connected by sliding
means which comprising bracket and guiding members for the system as claimed (see col. 9,
lines 25-45). In addition, Ni shows the bottom surface of the keyboard and the bottom surface of
the electronic housing are parallel to each other.

In reference to claim 15, refer to the rejection as applied to claim 3.

7. Claims 5, 11, 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Blandenburg and Ni in view of Makala et al. (U. S. Patent No. 6,047,196).

In reference to claims 5, 11, 17 and 23, Blandenburg discloses in Fig. 4, plurality of input
devices is provided in the boundary strips around the display device. For examples one boundary
may be indicated by a "-" sign and the opposing end boundary may be indicated by a "+" sign
(col. 10, lines 26-60). However, Blandenburg does not disclose the plurality of additional



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: SANG MIN LEE

Serial No.: 09/940,210

Group Art Unit: 2674

Title: COMPACT KEYBOARD FOR HANDHELD COMPUTER

Examiner: DUC Q DINH

APPELLANT'S BRIEF

This brief is in furtherance of the Notice of Appeal filed in this case on November 30, 2005. This Brief is being filed in response to an office communication dated 6/30/2005. The brief is transmitted in triplicate as required under 37 C.F.R. §1.192(a)) The applicant submits this brief in response to the office communication dated 5/30/2007. The applicant requests one month extension of time. Applicant added the correct status to claims after final office action. Applicant also added appendix for related pleadings and stated none.

CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10

I hereby certify that, on the date shown below, this correspondence is being: Deposited with the United States Postal Service in an envelop addressed to Mail Stop Appeal Brief, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 as express Mail Post Office to Addressee Mailing Label NO. EQ 0558242146

Date: 7/29/07

[Signature]
Signature

I. REAL PARTY INTEREST

The real party in interest in this appeal is the party named in the caption of this brief, **SANG MIN LEE**.

II. RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal, there are no such appeals or interferences

III. STATUS OF CLAIMS

Applicant received a first non-final office action in August of 2001. Applicant amended claims in line with a telephone communication with Examiner 8/28/2001. Claim 2 was allowed. Claim 1 was amended with part of the limitation of claim 2 to place the application in a condition for allowance. Claims 4, 10, and 16 were amended to correct the spelling of LCD. Claims 19-24 was added to reclaim subject matter in claim 1 for a continuation. As result of the claims status are as follows (See Exhibit 1 in the Appendix of claims):

1. (currently amended)
2. (currently amended)
3. (original)
4. (currently amended)
5. (original)
6. (original)
7. (original)
8. (original)

9. (original)
10. (currently amended)
11. (original)
12. (original)
13. (original)
14. (original)
15. (original)
16. (currently amended)
17. (original)
18. (original)
19. (new)
20. (new)
21. (new)
22. (new)
23. (new)
24. (new)

A year later Applicant received a second non-final office action in December 2004. Applicant amended claims in line a telephone communication with Examiner. Examiner and Applicant agreed that claim 1 was distinguished from the prior art Blandenberg. However, we discussed how claim 7 and 13 had to be amended to further distinguish the application from the Blandenberg As result of the claims status were as follows (See Exhibit 2 in the Appendix of claims):

STATUS OF CLAIMS AFTER SECOND NON-FINAL ACTION

1. (previously presented)
2. (previously presented)
3. (original)
4. (previously presented)
5. (original)
6. (original)
7. (currently amended)
8. (original)
9. (original)
10. (previously presented)
11. (original)
12. (original)
13. (currently amended)
14. (original)
15. (original)
16. (previously presented)
17. (original)
18. (original)
19. (previously presented)
20. (previously presented)
21. (previously presented)
22. (previously presented)
23. (previously presented)

24. (previously presented)

STATUS OF CLAIMS AFTER FINAL ACTION (Exhibit 3)

1. (previously presented)
2. (previously presented)
3. (original)
4. (previously presented)
5. (original)
6. (original)
7. (currently amended)
8. (original)
9. (original)
10. (previously presented)
11. (original)
12. (original)
13. (currently amended)
14. (original)
15. (original)
16. (previously presented)
17. (original)
18. (original)
19. (previously presented)
20. (previously presented)
21. (previously presented)

22. (previously presented)

23. (previously presented)

24. (previously presented)

IV. STATUS OF AMENDMENTS

As noted above, a year later Applicant received a second non-final office action in December 2004. Applicant amended claims in line a telephone communication with Examiner. Examiner and Applicant agreed that claim 1 was distinguished from the prior art Blandenberg. However, we discussed how claim 7 and 13 had to be amended to further distinguish the application from the Blandenberg. These amendments were discussed on the phone. These amendments were entered.

Applicant received a final office action on 6/30/2005. The examiner raised new issues in this final office action and should not be allowed to do this. Applicant amendments after final rejection were not entered. These arguments are raised below. This office action was not in line with examiner and applicant prior telephone conversation. Additionally, this office action raised issues that were never discussed in the telephone conversation. Claim 13 was rejected under 35 USC 112. I reviewed the specifications and drawings and determined there were typographical errors in the specifications. I provided that explanation to the examiner in a telephone conversation. Applicant amended the specifications because there was a mislabeling on the drawings of 746, 742, 741, 745 and 7A. I felt that arrow A in drawing 7A needed to be clarified. There were typographical errors in specifications which were changed accordingly Page 9 lines 9-29 and page 10 lines 1-8. The claims presented with the response to the final office action are presented below (See exhibit 3). The

claims were not amended. Only the specification was amended to correct 112 rejection. Applicant reasserted the amendments from the prior office action. (See Exhibit 3).

1. (previously presented)
2. (previously presented)
3. (original)
4. (previously presented)
5. (original)
6. (original)
7. (previously presented)
8. (original)
9. (original)
10. (previously presented)
11. (original)
12. (original)
13. (previously presented)
14. (original)
15. (original)
16. (previously presented)
17. (original)
18. (original)
19. (previously presented)
20. (previously presented)

- 21. (previously presented)
- 22. (previously presented)
- 23. (previously presented)
- 24. (previously presented)

V. SUMMARY OF CLAIMED SUBJECT MATTER

Referring to FIG 1 -3A, page 4 lines 29-37, and page 5 lines 2-29, a description of independent claim 1 is provided. Because independent claim 19 is a broader claim than claim 1, it is also described in the above listed pages. Independent Claim 1 and 19 discloses a handheld computerized device with an attached compact keyboard. In this embodiment of the present invention, the device consists of a keyboard portion and an electronic portion. The keyboard portion and the electronic housing both have a configuration defined by a top edge, bottom edge, top surface, bottom surface, and a pair of side edges. In this embodiment of the present invention, the top edge of the keyboard portion is hingedly connected to the top edge of the electronic housing. A keypad overlays the top surface of the keyboard portion and a display means overlays the top surface of the electronic housing. A microprocessor is situated inside the electronic housing and is electrically connected to keyboard the portion. The hinge connection between the keyboard portion and the electronic housing allows the keyboard portion to pivot from a closed position into an operable position. When in a closed position the keypad and display means are enclosed in a cavity formed by the closure of the keyboard portion against the electronic housing. To pivot into an operable position, the keyboard portion is pivoted 360 degrees around the longitudinal axis of the electronic housing such that the bottom surface of the keyboard portion becomes parallel to the bottom surface of the electronic housing.

Referring to FIG. 6, and page 8 lines 22-29, a description of independent claim 7 is provided. Independent Claim 7 discloses another embodiment of a handheld computerized device with an attached compact keyboard. In this embodiment of the present invention, the bottom surface of the keyboard portion is permanently affixed to the bottom surface of the electronic housing. In this embodiment the handheld device is

fixed in its operable position. A keypad overlay the top surface of the keyboard portion and a display means overlays the top surface of the electronic housing.

Referring to FIG. 7-7C, and page 9 lines 9-29, and page 10 lines 2-11, a description of claim 13 is provided. Claim 13 discloses another embodiment of a handheld computerized device with an attached compact keyboard. In this embodiment of the present invention, the handheld device consists of a sliding bracket having a pair of guide members integrally coupled to the side edges of the electronic housing. The side edges of the keyboard portion are adapted to slide into the guide members. In this embodiment the handheld device is placed in an operable by sliding the keyboard portion with the bottom surface of the keyboard portion parallel to the bottom surface of the electronic housing.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Applicant is requesting a review of the 103 rejections of claims 1, 2, 19-24, and 7, and 8. Additionally, the 112 rejection of claim 13 needs to be reviewed in this appeal.

VII. ARGUMENT

ISSUE 1: 103 REJECTION OF CLAIM INDEPENDENT CLAIM 1, 2, 7, 8, 19-23.

In my final office action response, Applicant reiterated original response per the telephone interview on December 27, 2004 as follows. In his final office action response, Examiner never discussed FIG. 6C of Brandenburg. Per our telephone conversation, Applicant pointed out the significance of FIG. 6C. Brandenburg is provided in Exhibit 4. Regarding claim 1, Applicant and Examiner agreed that Applicant's claimed invention could be distinguished from Blandenberg. Applicant claims:

a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair

*of side edges, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;*

Blandenberg states:

As device 801 transitions to the open state, display portion 803 hingedly pivots relative to body portion 807 as indicated by arrow 809 in FIG. 6B. In the open state, display screen 815 is adjacent to and visible above thumbboard 805. Fig. 6a shows the closed state and Fig. 6B is still in the closed state to show the transition to FIG. 6C.

As shown in FIG. 6C of Blandenberg, the invention in the prior art keyboard is adjacent to the keyboard in an open state. Blandenberg illustrates in FIG. 6A and 6B that bottom surface of the keyboard and display portion are parallel in a closed state.

Applicant claims the electronic housing having the display and the keyboard portion are parallel in an open state. Thus, the Applicant's invention is distinguished from the prior art. As shown in FIG.'S, 6A, 6B, and 6C, the lower edge of the display is hingedly connected to the top edge of the keyboard housing. As shown in FIG. 1 in the specification, the two top edges are hingedly connected as claimed.

Regarding claim 7, Examiner cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. A factual inquiry whether to combine references must be thorough and searching. A showing of suggestion, teaching or motivation to combine the prior art references is an essential component of an obvious holding. The prior art must suggest a desirability to combine prior art references. (See 277 F3d 1338, 61 USPQ2d 1430 (Fed. Cir 2002)).

Here, examiner noted that Brandenburg does not teach the limitation of the bottom surface being permanently affixed of the keyboard in an operable position. The examiner tried to use Brandenburg to fit the claim limitations of Applicant's invention. However, as noted above Brandenburg does not teach or suggest the configuration as claimed by the applicant. Brandenburg teaches a pivoting of a display into a normal configuration with the display adjacent to the keyboard in an open state. The device in Brandenburg is not hingedly connected as claimed by the Applicant. The hingedly connection between the two top edges facilitates the transitioning of the applicant's device the open state.

Ni illustrates a keyboard affixed to the backside of a notebook computer or gamebox. Ni is new reference traversed by the examiner. Additionally, the Keyboard in Ni is not Parabolic as claimed by the Applicant.

Ni nor Brandenburg discloses hand grips for supporting the hands while typing on the keyboard when the device is in the open state. In Brandenburg in FIG. 6C, a standard keyboard is shown. Thus hand support means on the side is not required. Label 827 in FIG. 6C designates joysticks. By plain definition joysticks are not used

conversation; because these amendments are typographical they could have been taken care of before final office action response. This was never mentioned to me prior to final office action):

- *Labels (746,747) was replaced with 736, 737 to show rib designations. Numerals 746 and 747 were designated as ribs earlier in the application. This is an obvious error that can be amended.*
- *Labels 741 and 742 were changed because their designations are reversed in the drawings. This is an obvious error that can be amended.*
- *More designations were added to FIG. 7A and 7B for clarification and to bring them in line with FIG. 7 and 7C. These designations are taken directly from the drawings 7 and 7C which were disclosed in the original disclosure.*
- *Numeral 765 was changed to 745. Numeral 745 is depicted as bottom surface of the electronic housing in the specifications and drawings. This is an obvious error for amendment.*
- *A description of 7A and 7B was added for clarification for examiner. 7B was changed to 7A. 7A is the closed state. This is an obvious error that can be amended in view of the drawings.*
- *As shown in FIG. 7A, in the closed state the keypad (125) faces the bottom surface of the electronic housing which is also stated in the specifications on Page 10, "After the user is finished using device (700), the keyboard portion (710) is slid into guide members (735, 737) with the keypad (725) facing the bottom surface (~~765~~) (745) of electronic housing*

for hand support means. Thus, there is no motivation to combine Ni and Brandenburg.

Additionally, it also follows that there is no motivation to combine Makala as well.

Regarding claims 19-24, the above arguments would follow. As explained above claim 19-24 was added to recapture the claim limitation of the original filed application after the first office action. Applicant amended claim 1 to put the application in a condition of allowance.

ISSUE 2: 112 REJECTION OF CLAIM 13

Claim 13 was amended in the final office action to claim an alternative embodiment of claim 1, wherein the invention is slid into an operable position with the bottom surface of electronic housing (720) and keyboard portion (710) in a parallel position. (See Page10 lines 3-5 and FIG. 7C).

The specifications do more than just mention operable versus closed state. Page 9 lines 9-29 and page 10 lines 1-8 disclose the full process of how the embodiment of claim 13 functions. There are some typographical errors between the FIG.'S 7A-7C and the specifications. The disclosure can be amended to matter that is inherently disclosed by the original application. *(See In re Smyte, 480 F.2d 1376, 178 USPQ 279 (C.C.P.A))* As a result, applicant has amended the specifications to be in line with the drawings which are part of the original disclosure. Examiner alleges that the specifications fail to convey to one skilled in the art. Applicant has amended FIG 7A and 7B with labels in line with FIG 7 and FIG. 7C. Applicant provided original drawing of FIG. 7C with response to Office Action for clarification. The specification was amended as follows (Please note that examiner and applicant discussed these changes in a telephone

(720)" As shown in the operable state in FIG. 7B, keypad 125 does not face the bottom surface of the electronic housing. However, Applicant can change wording to state a parallel configuration which is also depicted in FIG. 7A if required by the examiner.

Drawings are considered part of the specifications. (*See Was-Cath, Inc v. Mahurkar*, 935 F2d 1555, 19 USPQ2d 1111, 1118 (Fed. Cir. 1991)). Fig.'s 7A-7C illustrates the configuration of operable and closed state of this embodiment of the present invention. The language of claim 13 comes directly from the specifications in conjunction with the drawings. It is not clear what examiner means by the specification do not reasonably convey to one skilled in the art. Clarification is required because the drawings are clear. The description does not require literal support for the claimed invention. The disclosure should convey the concept that is claimed. (*See Ex Parte Parks* 30 USPQ2d 1234, 1246-27 (B.P.A.I 1993))

Here, the drawings do provide the concept of the claimed invention. The changes to the specifications to bring them in line with drawings are appropriate changes.

Applicant ask board to take note that the first examiner allowed the claims and the applicant amended in line with the first office action. See Office Action in Exhibit 5. Additionally, it took the patent office another year to respond and reject the claims. See Exhibit 6. Blandenburg does not function as the applicant invention.

VIII. APPENDIX A OF CLAIMS INVOLVED IN THIS APPEAL

- Exhibit 1 – First non-final Office Action amendment with claims
- Exhibit 2- Second non-final Office Action Amendment with Claims
- Exhibit 3- Final Office Action Response with Claims

IX. EVIDENCE APPENDIX B

- Exhibit 4 – Brandenburg Patent with drawings at issue
- Exhibit 5 – First Non-final Office Action
- Exhibit 6—Second non-final office action

IX. RELATED PROCEEDINGS APPENDIX

NONE.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF : SANG MIN LEE

Serial No.: 09/940,210

Filed: 08/28/2001

Group Art Unit: 2674

Title: COMPACT KEYBOARD FOR HANDHELD COMPUTER

Examiner: Francis Nguyen

AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Honorable Sir:

This amendment is filed in response to the office action dated August 28, 2001.

IN THIS CLAIMS

1. (currently amended): A handheld computerized device comprising:
a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base; an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;
a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands

are supported while the user is typing on the keypad;
a means for displaying data overlaying the top surface of the electronic housing; and
a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby data entered at the keypad is transmitted to the processor and displayed by the display means[.];
a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

2. (currently amended): The device recited in Claim 1, wherein the keypad further comprises:
[a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;]
the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.
3. (original): The device recited in Claim 1, wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
4. (currently amended): The device recited in Claim 3 wherein the display area is a Liquid [Crystals] Crystal Display (LCD).
5. (original): The device recited in Claim 3, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and

a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

6. (original): The device recited in Claim 1, further comprising:

a pressure sensitive writing means for allowing data to be inputted via handwriting; and
the pressure sensitive writing means overlapping the bottom edge of the display area.

7. (original): A handheld computerized device comprising:

a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;

an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard portion;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;

a means for displaying data overlaying the top surface of the electronic housing; and

a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.

8. (original): The device recited in Claim 7, wherein the keypad further comprises:

a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;

the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and

the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

9. (original): The device recited in Claim 7, wherein the display means further comprises:

a display area defined by a top edge, bottom edge, and a pair of side edges;

- a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
10. (currently amended): The device recited in Claim 9 wherein the display area is a Liquid [Crystals] Crystal Display (LCD).
11. (original): The device recited in Claim 10, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
12. (original): The device recited in Claim 7, further comprising:
a pressure sensitive writing means for allowing data to be inputted via handwriting; and
the pressure sensitive writing means overlapping the bottom edge of the display area.
13. (original): A handheld computerized device comprising:
a sliding bracket having a pair of guide members;
a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being adapted to slide into the pair of guide members, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being integrally coupled to the pair of guide members;
a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
a means for displaying data overlaying the top surface of the electronic housing; and
a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.

14. (original): The device recited in Claim 13, wherein the keypad further comprises:
a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand;
15. (original): The device recited in Claim 13, wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
16. (currently amended): The device recited in Claim 15 wherein the display area is a Liquid [Crystals] Crystal Display (LCD).
17. (original): The device recited in Claim 15, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
18. (original): The device recited in Claim 13, further comprising:
a pressure sensitive writing means for allowing data to be inputted via handwriting; and
the pressure sensitive writing means overlapping the bottom edge of the display area.
19. (new): A handheld computerized device comprising:
a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;

an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;
a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad; and.

20. (new): The device recited in Claim 19, wherein the keypad further comprises:
a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

21. (new): The device recited in Claim 14, wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, securely attached to each corresponding strip of the display area.

22. (new): The device recited in Claim 3, wherein the display area is a Liquid Crystal Display (LCD).

23. (new): The device recited in Claim 3, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal

upon depression thereof; and

a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

24. (new): The device recited in Claim 1, further comprising:

a pressure sensitive writing means for allowing data to be inputted via handwriting; and
the pressure sensitive writing means overlapping the bottom edge of the display area.

REMARKS

AMENDMENTS

1. REGARDING CLAIMS 4, 10, and 16

The word **CRYSTALS** is misspelled. The correct interpretation of **LCD** is Liquid Crystal Display. Each claim was corrected accordingly.

2. REGARDING CLAIMS 1 AND 2

Per our telephone interview, in order to place claims 1-6 in a condition for allowance, the first two limitations of claim 2 was moved up into claim 1. The last two claim limitations were remained in claim 2.

ARGUMENTS

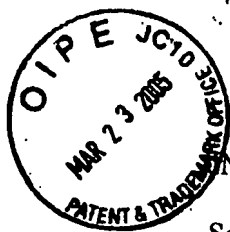
3. REGARDING ORIGINAL CLAIM 1

Genest discloses a latch and a hook to fasten the two portions of the handheld device together. Fastening means is normally defined as some type of structure that holds two separate structures together such as screw or latch and a hook. The applicant's claim invention discloses a hand support means for supporting the left and right hand while typing on the keypad. When the word "whereby" and its accompanying phrase set forth a structural limitation for the invention recited in the claim, the word "whereby" and the accompanying phrase will be considered a positive limitation of the claim and thereby limit the claim accordingly. (See *Scheinman v Zalkind*, 112 F.2d 1017, 1019, 46 USPQ 141, 143 (C.C.P.A 1940)). The Genest disclosed fastening means does not provide a structure to for hand support means. Your fingers are required to connect and dislodge the latch and hook. However, technically the fastener does not provide hand support. The applicant describes hand support means as a structure required to support the hands during typing. (See Page 8 Lines 23-29 and Page 9 Lines 1-5 in the specifications) The Genest disclosed fastening means is not structurally or functionally equivalent to the disclosed hand support means. Since the Genest disclosed fastening means is not an

Exhibit 2

03-24-05

2674



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: SANG MIN LEE

Serial No.: 09/940,210

Group Art Unit: 2674

Title: COMPACT KEYBOARD FOR HANDHELD COMPUTER

Examiner: DUC Q DINH

AMENDMENT

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Honorable Sir:

This amendment is filed in response to the office communication dated 3/3/2005. I have added claims 19-24. I have enclosed the fee for \$5.00.

IN THE CLAIMS

1. (Previously Presented) A handheld computerized device comprising:
 - a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
 - an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;
 - a pair of hand support means being securely attached at an ergonomic position along

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01 FC:2251

each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
a means for displaying data overlaying the top surface of the electronic housing; and
a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby data entered at the keypad is transmitted to the processor and displayed by the display means; and
a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

2. (Previously Presented) The device recited in Claim 1, wherein the keypad further comprises:

~~a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;~~
~~the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;~~

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and

the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

3. (original) The device recited in Claim 1, wherein the display means further comprises:

a display area defined by a top edge, bottom edge, and a pair of side edges;

a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and

each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.

4. (Previously Presented) The device recited in Claim 3 wherein the display area is a Liquid Crystals Crystal Display (LCD).

5. (original) The device recited in Claim 3, wherein the bottom strip and each side strip of the front panel further comprises:
- a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
 - a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
6. (original) The device recited in Claim 1, further comprising:
- a pressure sensitive writing means for allowing data to be inputted via handwriting;
 - and
 - the pressure sensitive writing means overlapping the bottom edge of the display area.
7. (currently amended) A handheld computerized device comprising:
- a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
 - an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard portion in an operable position;
 - a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
 - a means for displaying data overlaying the top surface of the electronic housing; and
 - a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.
8. (original) The device recited in Claim 7, wherein the keypad further comprises:
- a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
 - the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

- the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
- the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.
9. (original) The device recited in Claim 7, wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
10. (Previously Presented) The device recited in Claim 9 wherein the display area is a Liquid Crystals Crystal Display (LCD).
11. (original) The device recited in Claim 10, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
12. (original) The device recited in Claim 7, further comprising:
a pressure sensitive writing means for allowing data to be inputted via handwriting;
and
the pressure sensitive writing means overlapping the bottom edge of the display area.
13. (currently amended) A handheld computerized device comprising:
a sliding bracket having a pair of guide members;
a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being adapted to slide into the pair of guide members in an operable state or in a closed state, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being integrally coupled to the pair of guide members;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;

in the operable state, the side edges of the support base are adapted to slide into the guide members such that the bottom surface of the support base and the bottom surface of the electronic housing are parallel to each other;

in the closed state, the side edges of the support base are adapted to slide into the guide members such that the keypad faces the top surface of the electronic housing;

a means for displaying data overlaying the top surface of the electronic housing; and
a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.

14. (original) The device recited in Claim 13, wherein the keypad further comprises:

a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;

the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and

the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand;

15. (original) The device recited in Claim 13, wherein the display means further comprises:

a display area defined by a top edge, bottom edge, and a pair of side edges;

a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and

each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.

16. (Previously Presented) The device recited in Claim 15 wherein the display area is a Liquid ~~Crystals~~ Crystal Display (LCD).

17. (original) The device recited in Claim 15, wherein the bottom strip and each side strip of the

front panel further comprises:

- a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
- a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

18. (original) The device recited in Claim 13, further comprising:

- a pressure sensitive writing means for allowing data to be inputted via handwriting;
- and
- the pressure sensitive writing means overlapping the bottom edge of the display area.

19. (Previously Presented) A handheld computerized device comprising:

- a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
- an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;
- a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad.

20. (Previously Presented): The device recited in Claim 19, wherein the keypad further comprises:

- a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas,
- the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
- the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and

the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

21. (Previously Presented) The device recited in Claim 19 wherein the display means further comprises:

- a display area defined by a top edge, bottom edge, and a pair of side edges;
- a front panel surrounding the display area and being defined by a top strip, a bottom strip, securely attached to each corresponding strip of the display area.

22. (Previously Presented): The device recited in Claim 21 wherein the display area is a Liquid Crystal Display (LCD).

23. (Previously Presented): The device recited in Claim 21 wherein the bottom strip and each side strip of the front panel further comprises:

- a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof;
- a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

24. (Previously Presented) The device recited in Claim 19 further comprising :

- a pressure sensitive writing means for allowing data to be inputted via handwriting; and
- the pressure sensitive writing means overlapping the bottom edge of the display area.

IN THE CLAIMS

1. (Previously Presented) A handheld computerized device comprising:
 - a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
 - an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;
 - a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
 - a means for displaying data overlaying the top surface of the electronic housing; and
 - a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby data entered at the keypad is transmitted to the processor and displayed by the display means; and
 - a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
 - the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
2. (Previously Presented) The device recited in Claim 1, wherein the keypad further comprises:
 - ~~a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;~~
 - ~~the first and the second section lying co-planar vertically parallel along the top surface~~

~~of the support base of the keyboard portion;~~

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and

the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

3. (original) The device recited in Claim 1, wherein the display means further comprises:
 - a display area defined by a top edge, bottom edge, and a pair of side edges;
 - a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
 - each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
4. (Previously Presented) The device recited in Claim 3 wherein the display area is a Liquid Crystals Crystal Display (LCD).
5. (original) The device recited in Claim 3, wherein the bottom strip and each side strip of the front panel further comprises:
 - a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
 - a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
6. (original) The device recited in Claim 1, further comprising:
 - a pressure sensitive writing means for allowing data to be inputted via handwriting;
 - and
 - the pressure sensitive writing means overlapping the bottom edge of the display area.
7. (currently amended) A handheld computerized device comprising:
 - a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
 - an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard portion in an operable position;

- a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
- a means for displaying data overlaying the top surface of the electronic housing; and
- a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.
8. (original) The device recited in Claim 7, wherein the keypad further comprises:
- a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
 - the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
 - the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
 - the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.
9. (original) The device recited in Claim 7, wherein the display means further comprises:
- a display area defined by a top edge, bottom edge, and a pair of side edges;
 - a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
 - each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
10. (Previously Presented) The device recited in Claim 9 wherein the display area is a Liquid ~~Crystals~~ Crystal Display (LCD).
11. (original) The device recited in Claim 10, wherein the bottom strip and each side strip of the front panel further comprises:
- a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
 - a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

12. (original) The device recited in Claim 7, further comprising:
 a pressure sensitive writing means for allowing data to be inputted via handwriting;
 and
 the pressure sensitive writing means overlapping the bottom edge of the display area.
13. (currently amended) A handheld computerized device comprising:
 a sliding bracket having a pair of guide members;
 a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being adapted to slide into the pair of guide members in an operable state or in a closed state, the keypad overlaying the top surface of the support base;
 an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being integrally coupled to the pair of guide members;
 a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
in the operable state, the side edges of the support base are adapted to slide into the guide members such that the bottom surface of the support base and the bottom surface of the electronic housing are parallel to each other;
in the closed state, the side edges of the support base are adapted to slide into the guide members such that the keypad faces the top bottom surface of the electronic housing
 a means for displaying data overlaying the top surface of the electronic housing; and
 a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.
14. (original) The device recited in Claim 13, wherein the keypad further comprises:
 a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
 the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

- the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
- the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand;
- 15.(original) The device recited in Claim 13, wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
- 16.(Previously Presented) The device recited in Claim 15 wherein the display area is a Liquid Crystals Crystal Display (LCD).
- 17.(original) The device recited in Claim 15, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
- 18.(original) The device recited in Claim 13, further comprising:
a pressure sensitive writing means for allowing data to be inputted via handwriting;
and
the pressure sensitive writing means overlapping the bottom edge of the display area.
19. (Previously Presented) A handheld computerized device comprising:
a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the

bottom surface of the electronic housing is parallel to the bottom surface of the support base;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad.

20. (Previously Presented): The device recited in Claim 19, wherein the keypad further comprises:
a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas,
the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.
21. (Previously Presented) The device recited in Claim 19 wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, securely attached to each corresponding strip of the display area.
22. (Previously Presented): The device recited in Claim 21 wherein the display area is a Liquid Crystal Display (LCD).
23. (Previously Presented): The device recited in Claim 21 wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof;
a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
24. (Previously Presented) The device recited in Claim 19 further comprising :
a pressure sensitive writing means for allowing data to be inputted via handwriting; and
the pressure sensitive writing means overlapping the bottom edge of the display area.

ARGUMENTS

I am reiterating my original response per our telephone interview on December 27, 2004 as follows. In his response, Examiner never discussed FIG. 6C of Brandenburg. Per our telephone conversation, I pointed out the significance of FIG. 6C.

Regarding claim 1, we agreed that Applicant's claimed invention could be distinguished from Blandenberg. Applicant claims:

a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;

Blandenberg states:

As device 801 transitions to the open state, display portion 803 hingedly pivots relative to body portion 807 as indicated by arrow 809 in FIG. 6B. In the open state, display screen 815 is adjacent to and visible above thumbboard 805. Fig. 6a shows the closed state and Fig. 6B is still in the closed state to show the transition to FIG. 6C.

As shown in FIG. 6C, the invention in the prior art keyboard is adjacent to the keyboard in an open state. The prior illustrates in FIG. 6A and 6B that bottom surface of the keyboard and display portion are parallel in a closed state. However, applicant claims the electronic housing

having the display and the keyboard portion are parallel in an open state. Thus, the Applicant's invention is distinguished from the prior art. As shown in FIG.'S, 6A, 6B, and 6C, the lower edge of the display is hingedly connected to the top edge of the keyboard housing. As shown in FIG. 1 in the specification, the two top edges are hingedly connected as claimed.

Regarding independent claim 7, claim 7 was amended to claim an alternative embodiment of claim 1, wherein the invention is affixed into an operable position with the bottom surface of electronic housing (620) and keyboard portion (610) in a parallel position. (See Page 8 line 8-16 and FIG. 6)

Regarding independent claim 13, claim 13 was amended to claim an alternative embodiment of claim 1, wherein the invention is slid into an operable position with the bottom surface of electronic housing (720) and keyboard portion (710) in a parallel position. (See Page 10 lines 3-5 and FIG. 7C).

112 REJECTION OF CLAIM 13

The specifications do more than just mention operable versus closed state. The Page 9 lines 9-29 through page 10 lines 1-8 discloses the full process. There are some typographical errors between the FIG.'S 7A-7C and the specifications. The disclosure can be amended to matter that is inherently disclosed by the original application. (*See In re Smyte, 480 F.2d 1376, 178 USPQ 279 (C.C.P.A.)*) As a result, applicant has amended the specifications to be in line with the drawings which are part of the original disclosure. Examiner alleges that the specifications fail to convey to one skilled in the art. Applicant has amended FIG 7A and 7B with labels in line with FIG 7 and FIG. 7C. Applicant has provided FIG. 7C for clarification. The specification was amended as follows (Please note that examiner and applicant discuss

these changes in a telephone conversation; these amendments could have been taken care of before final office action response):

- label (746,747) was replaced with 736, 737 to show rib designations. 746, 747 was designated as ribs earlier in the application. This is an obvious error that can be amended.
- labels 741 and 742 was changed because their designation are reversed in the drawings. This is an obvious error that can be amended.
- More designations were added to FIG. 7A and 7B for clarification and to bring them in line with FIG. 7 and 7C. These designations are taken directly from the drawings 7 and 7C which were disclosed in the original disclosure.
- 765 was changed to 745. 745 is depicted as bottom surface of the electronic housing in the specifications and drawings. This is an obvious error for amendment.
- a description of 7A and 7B was added for clarification for examiner. 7B was changed to 7A. 7A is the closed state. This is an obvious error that can be amended in view of the drawings.
- Claim 13 was amended for examiner clarification. As shown in FIG. 7A, in the closed state the keypad (125) faces the bottom surface of the electronic housing which is also stated in the specifications on Page 10, "*After the user is finished using device (700), the keyboard portion (710) is slid into guide members (735, 737) with the keypad (725) facing the bottom surface ~~(765)~~ (745) of electronic housing (720)*" As shown in the operable state in FIG. 7B, keypad 125 does not face the bottom surface of the electronic housing. However,

Applicant can change wording to state a parallel configuration which is also depicted in FIG. 7A if required by the examiner.

Drawings are considered part of the specifications. (*See Was-Cath, Inc v. Mahurkar, 935 F2d 1555, 19 USPQ2d 1111, 1118 (Fed. Cir. 1991)*). Fig.'s 7A-7C illustrates the configuration of operable and closed state of this embodiment of the present invention. The language of claim 13 comes directly from the specifications in conjunction with the drawings. It is not clear what examiner means by the specification do not reasonably convey to one skilled in the art. Clarification is required because the drawings are clear. The description does not require literal support for the claimed invention. The disclosure should convey the concept that is claimed. (*See Ex Parte Parks 30 USPQ2d 1234, 1246-27 (B.P.A.I 1993)*) *Here, the do drawings provide the concept of the claimed invention.*

103 REJECTIONS

Examiner cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. A factual inquiry whether to combine references must be thorough and searching. A showing of suggestion, teaching or motivation to combine the prior art references is an essential component of an obvious holding. The prior art must suggest a desirability to combine prior art references. (See 277 F3d 1338, 61 USPQ2d 1430 (Fed. Cir 2002)).

Here, the examiner tried to use Brandenburg to fit the claim limitations of Applicant. However, Brandenburg does not teach or suggest the configuration as claimed by the applicant. Brandenburg teaches a pivoting of a display into a normal configuration with the display adjacent to the keyboard in an open state. The device in Brandenburg is not hingedly

connected as claimed by the Applicant. The hingedly connection between the two top edges facilitates the transitioning of the applicant's device the open state.

Ni illustrates a backside keyboard for a notebook computer or gamebox. Ni is new reference traversed by the examiner. Additionally, the Keyboard in Ni is not Parabolic and is not hingedly connected as claimed by the Applicant.

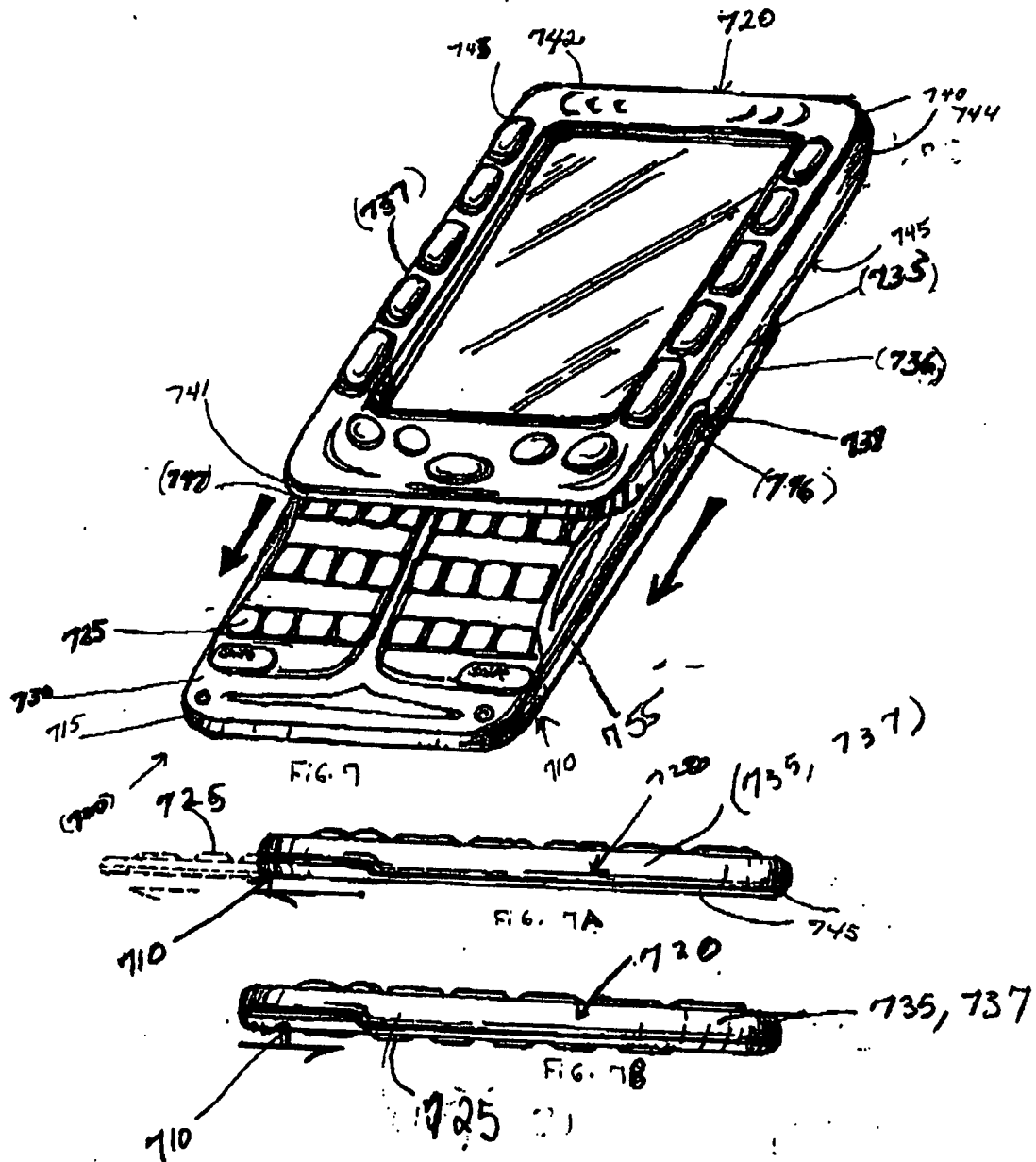
Ni nor Brandenburg discloses hand grips for supporting the hands while typing on the keyboard when the device is in the open state. In Brandenburg in FIG. 6C, a standard keyboard is shown. Thus hand support means on the side is not required. Label 827 in FIG. 6C designates joysticks. By plain definition joysticks are not used for hand support means. Thus, there is no motivation to combine Ni and Brandenburg. Additionally, it also follows that there is no motivation to combine Makala as well.

Examiner is reminded that Applicant has amended independent claims 7 and 13 to further distinguish with the prior art. In view of the above amendments to independent claims 7 and 13 and supporting argument to claim 1, Applicant respectfully requests that the rejections to the supporting dependent claims be withdrawn. Alternately should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, he/she is invited to telephone the undersigned.

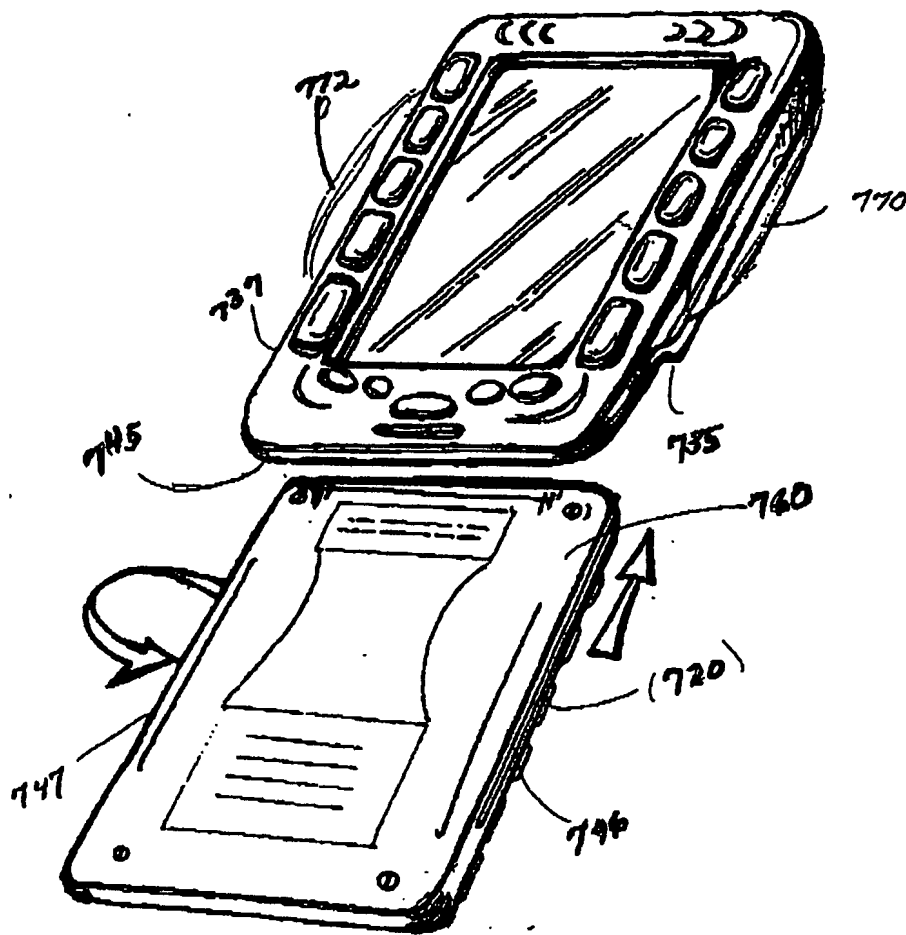
Respectfully submitted:


Delphine M. James

Replacement
Sheet



Replacement
Sheet



Office Action Summary

Application No.

09/940,210

Applicant(s)

LEE, SANG MIN

Examiner

FRANCIS NGUYEN

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
 Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) NONE is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9-13 and 15-18 is/are rejected.
- 7) ☐ Claim(s) 2,8 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Draft

5850

703-746-7850

Page 2

DETAILED ACTION

Claim Objections

STRAIGHT TO
Computer

1. Claims 4, 10, 16 are objected to because of the following informalities: incorrect word "Crystals" in claim 4(page 4, line 5), claim 10(page 13, line 16), claim 16 (page 14, line 29).

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-7, 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Genest et al. (US Patent 6,480,377) in view of Price et al. (US Patent 6,377,444).

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1 (original)
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As to claim 1) Genesis et al. teaches a handheld computerized device (handheld computer 12 shown in figure 1, column 7, lines 50-54) comprising:

a keyboard portion having a support base and a keypad (keyboard 20 and support base shown in figure 1, column 7, lines 34-36, plurality of individual keys 58 shown in figure 3),
an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base (housing of handheld computer 12 shown in figure 1, hinge structure 17, column 7, lines 15-16)

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a pair of hand support means (latch hook 60 and hook receiving member 62, column 14, lines 28-32)

a means for displaying data (screen 32, column 8, lines 12-14)

a processor situated within the electronic housing (computer processor 30, column 8, lines 1-3)

However, Genest et al. fails to teach electronic housing pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base. Price et al. teaches hinged housings for electronic devices (see abstract), with first body portion and second body portion for rotation at an angle greater than 180 degrees from the mounting surface (column 3, lines 15-18) . It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of Genest et al. then modify the electronic housing to pivot from a closed position to an open position for more than 180 degrees as taught by Price et al. to obtain the apparatus Genest et al. modified by Price et al. because it would allow user to have multiple configurations , as taught by Price et al. (column 5, lines 35-36).

*Teaches rotating → (affixed)
into multiple into a
config. configuration*

As to claim 3, the device recited in claim 1, wherein the display means further comprises: a display area defined by a top edge, bottom edge, and a pair of side edges (Genest et al., screen 32, column 8, lines 3-4) ; a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and each edge of the display lying adjacent to and being securely attached to each corresponding strip of the display area (inherent on front side 26 shown on figure 1, for supporting LCD screen 32).

As to claim 4, the device recited in claim 3 wherein the display area is a Liquid Crystal Display (Genest et al., column 8, lines 13-14).

As to claim 5, the device recited in claim 3, wherein the bottom strip and each side strip of the front panel further comprises a plurality of additional alphanumeric keys (Genest et al., keys 58 and switches 56, column 11, lines 7-8) each adapted to generate a character signal upon depression thereof; and a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor (data port and data connector, column 11, lines 13-15).

As to claim 6, the device recited in claim 1, further comprising a pressure sensitive writing means for allowing data to be inputted via handwriting (Genest et al., column 8, lines 15-17 column 11, lines 58-64).

As to claim 7, Genesis et al. teaches a handheld computerized device (handheld computer 12 shown in figure 1, column 7, lines 50-54) comprising:

a keyboard portion having a support base and a keypad (keyboard 20 and support base shown in figure 1, column 7, lines 34-36) plurality of individual keys 58 shown in figure 3),
an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges (housing of handheld computer 12 shown in figure

1)

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a pair of hand support means (latch hook 60 and hook receiving member 62, column 14, lines 28-32) *rest of claim unstaten*

a means for displaying data (screen 32, column 8, lines 12-14)

a processor situated within the electronic housing (computer processor 30, column 8, lines 1-3)

However, Genest et al. fails to teach bottom surface of the electronic housing being securedly attached to the bottom surface of the keyboard portion . Note that Genest et al. does teach a hinge structure 17 (column 7, lines 15-16); this would allow pivoting. It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of Genest et al. then make use of the hinge for pivoting resulting in bottom surface of the electronic housing attached to the bottom surface of the keyboard portion to obtain the apparatus Genest et al. modified because it would allow different configurations for user. (3)

As to claim 9, the device recited in claim 7, wherein the display means further comprises: a display area defined by a top edge, bottom edge, and a pair of side edges (Genest et al., screen 32, column 8, lines 3-4) ; a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and each edge of the display lying adjacent to and being securely attached to each corresponding strip of the display area (inherent on front side 26 shown on figure 1, for supporting LCD screen 32).

As to claim 10, the device recited in claim 7 wherein the display area is a Liquid Crystal Display (Genest et al., column 8, lines 13-14).

As to claim 11, the device recited in claim 9, wherein the bottom strip and each side strip of the front panel further comprises a plurality of additional alphanumeric keys (Genest et al., keys 58 and switches 56, column 11, lines 7-8) each adapted to generate a character signal upon depression thereof; and a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor (data port and data connector, column 11, lines 13-15) .

As to claim 12, the device recited in claim 7, further comprising a pressure sensitive writing means for allowing data to be inputted via handwriting (Genest et al., column 8, lines 15-17 column 11, lines 58-64).

Claims 13, 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Genest et al. (US Patent 6,480,377) in view of Allgeyer et al. (US Patent 6,477,042)

As to claim 13, Genesis et al. teaches a handheld computerized device (handheld computer 12 shown in figure 1, column 7, lines 50-54) comprising:

- a keyboard portion having a support base and a keypad (keyboard 20 and support base shown in figure 1, column 7, lines 34-36) plurality of individual keys 58 shown in figure 3),
- an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges (housing of handheld computer 12 shown in figure 1)
- a pair of hand support means (latch hook 60 and hook receiving member 62, column 14, lines 28-32)

a means for displaying data (screen 32, column 8, lines 12-14)

a processor situated within the electronic housing (computer processor 30, column 8, lines 1-3)

However, Genest et al. fails to teach sliding brackets having a pair of guide members. Allgeyer et al. teaches a sliding bracket with rails (column 11, lines 55-57). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of Genest et al. then make use of sliding brackets with guide members as taught by Allgeyer to obtain the apparatus Genest et al. modified by Allgeyer et al. because it would allow ease of assembling/disassembling , as taught by Allgeyer (column 11, lines 56-57) and also user can easily change configuration.

As to claim 15, the device recited in claim 13, wherein the display means further comprises: a display area defined by a top edge, bottom edge, and a pair of side edges (Genest et al., screen 32, column 8, lines 3-4) ; a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and each edge of the display lying adjacent to and being securely attached to each corresponding strip of the display area (inherent on front side 26 shown on figure 1, for supporting LCD screen 32).

As to claim 16, the device recited in claim 15 wherein the display area is a Liquid Crystal Display (Genest et al., column 8, lines 13-14).

As to claim 17, the device recited in claim 15, wherein the bottom strip and each side strip of the front panel further comprises a plurality of additional alphanumeric keys (Genest et al., keys

58 and switches 56, column 11, lines 7-8) each adapted to generate a character signal upon depression thereof; and a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor (data port and data connector, column 11, lines 13-15) .

As to claim 18, the device recited in claim 13, further comprising a pressure sensitive writing means for allowing data to be inputted via handwriting (Genest et al., column 8, lines 15-17 column 11, lines 58-64).

Allowable Subject Matter

4. Claims 2, 8 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. *what about other limitations*

The following is a statement of reasons for the indication of allowable subject matter: As to claims 2, 8 and 14, none of prior art teaches the first section of a keypad arranged in the standard QWERTY keyboard for the left hand, the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

CONCLUSION

5. The prior art made of record not relied upon is pertinent to applicant's disclosure

US Patent Susel 6,111,527

US Patent Tzeng 6,431,776

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service whose telephone number is
(703) 306-0377.

May 16th, 2003

A handwritten signature in cursive script, appearing to read 'Francis N. Nguyen', written in dark ink.

FRANCIS N NGUYEN
Examiner
Art Unit 2674

Office Action Summary

Application No.

09/940,210

Applicant(s)

LEE, SANG MIN

Examiner

DUC Q. DINH

Art Unit

2674

Exhibit 6

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

*pull Ni
*(6,297,752)

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This is response to the Amendment filed on March 23, 2005.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 13-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amended claim 13 recites the limitation "in the closed state, the side edges of the support base are adapted to slide into the guide members such that the keypad faces the top surfaces of the electronic housing". Although the specification page 9-10 does mention the arrangement of the electronic device, there is no support in the specification for the quoted limitation above. The examiner examines the application based on best understood of the claimed language.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandenburg et al. (U. S. Patent No. 6,665,173), hereinafter Brandenburg.

In reference to claim 1, Brandenburg discloses in Fig. 6 a handheld computer comprising: keyboard portion 807 having support base and a thumbboard 805 (corresponding to the keyboard) defined by a top surface, a bottom surface, a rear edge, a front edge and a pair of side edges, the thumb board overlaying the top surface of the support base as claimed. An electronic housing 801 having the same structure with the keyboard portion as shown in Fig. 6A. Fig. 6B shows the coupling structure of the keyboard portion and the display portion in an open or closed position such that the bottom surface of the electronic housing is parallel to the bottom surface of the support base as claimed (col. 11, lines 35-53). The device specifically comprising (1) an alphanumeric data input device, such as a full QWERTY-type keyboard or thumb board; (2) a display device, such as an LCD, LED... display screen; (3) a processor; (4) a power source... and (6) a physical housing that contains these components (corresponding to the electronic housing) and that consists of at least two discrete portions that may translate, rotate and/or pivot relative to one another, one portion containing a display device and one portion containing a keyboard (col. 7 line 60 – col. 8 line 5). Fig. 7D show a keyboard having first and second section having plurality of key and being in the form of complementary symmetrical and vertically parallel with the top surface of the keyboard portion.

In addition, Brandenburg discloses that the system also has a plurality of raised grips 621 (corresponding to the hand support means) may be integrated into protective bumpers 619 to facilitate handling of and interaction with device 601. However, Blandenberg does not disclose the raised grips being attached to a side edge of the display portion of the device. Fig. 5 shows

* Exam
Zails
to address
Fig
6.C
in
Response

and touch pad on the backside of the device. The touch pad is located such that it can be utilized by the user while the device is in either closed state or open state (col. 11, lines 16-34)

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to provide the grips of the system to provide the user hand support while using the touchpad in the back of the display as shown in Fig. 5B or holding the device while typing on the keyboard as shown in Fig. 4.

In reference to claim 2, Fig. 7 shows the appropriate standard QWERTY keyboard format on the left and right hand as claimed.

In reference to claims 3, and 21, Fig. 6 A and 6C show the strips surrounding the display which carries the additional input device such as joystick for the system as claimed.

In reference to claims 4 and 22, see the rejection of claim 1 for the LCD display as claimed.

In reference to claims 19 and 20, refer to the rejection as applied to claim 1.

6. Claims 7-10 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blandenberg in view of Ni (U. S. Patent No. 6,297,752).

In reference to claim 7, refer to the rejection as applied to claim 1. However, Blandenberg does not disclose, the bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard in an operable position. Ni discloses a backside keyboard for a notebook having bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard as claimed.

It would have been obvious for one of ordinary skill in the art at the time of the invention
was made to learn the teaching of Ni, i.e., the bottom surface of the electronic housing being
securely attached to the bottom surface of the keyboard in an operable position, so that the user
has the same feel of location that occurs when the keyboard is on the top surface of the chassis
thereby eliminating the strain caused by twisting the wrist to type in the state of the art (col. 2,
lines 5-8).

In reference to claims 8-9, refer to the rejection as applied to claims 1-3.

In reference to claim 10, refer to the rejection as applied to claim 4.

In reference to claims 13 and 14, refer to the rejection of claim 1. In addition, Fig. 1-3
show an embodiment in which the keyboard portion and the display portion connected by sliding
means which comprising bracket and guiding members for the system as claimed (see col. 9,
lines 25-45). In addition, Ni shows the bottom surface of the keyboard and the bottom surface of
the electronic housing are parallel to each other.

In reference to claim 15, refer to the rejection as applied to claim 3.

7. Claims 5, 11, 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Blandenburg and Ni in view of Makala et al. (U. S. Patent No. 6,047,196).

In reference to claims 5, 11, 17 and 23, Blandenburg discloses in Fig. 4, plurality of input
devices is provided in the boundary strips around the display device. For examples one boundary
may be indicated by a "-" sign and the opposing end boundary may be indicated by a "+" sign
(col. 10, lines 26-60). However, Blandenburg does not disclose the plurality of additional



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: SANG MIN LEE

Serial No.: 09/940,210

Group Art Unit: 2674

Title: COMPACT KEYBOARD FOR HANDHELD COMPUTER

Examiner: DUC Q DINH

APPELLANT'S BRIEF

This brief is in furtherance of the Notice of Appeal filed in this case on November 30, 2005. This Brief is being filed in response to an office communication dated 6/30/2005. The brief is transmitted in triplicate as required under 37 C.F.R. §1.192(a)) The applicant submits this brief in response to the office communication dated 5/30/2007. The applicant requests one month extension of time. Applicant added the correct status to claims after final office action. Applicant also added appendix for related pleadings and stated none.

CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10

I hereby certify that, on the date shown below, this correspondence is being: Deposited with the United States Postal Service in an envelop addressed to Mail Stop Appeal Brief, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 as express Mail Post Office to Addressee Mailing Label NO. EQ 0558242146

Date: 7/29/07

[Signature]
Signature

I. REAL PARTY INTEREST

The real party in interest in this appeal is the party named in the caption of this brief, **SANG MIN LEE**.

II. RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal, there are no such appeals or interferences

III. STATUS OF CLAIMS

Applicant received a first non-final office action in August of 2001. Applicant amended claims in line with a telephone communication with Examiner 8/28/2001. Claim 2 was allowed. Claim 1 was amended with part of the limitation of claim 2 to place the application in a condition for allowance. Claims 4, 10, and 16 were amended to correct the spelling of LCD. Claims 19-24 was added to reclaim subject matter in claim 1 for a continuation. As result of the claims status are as follows (See Exhibit 1 in the Appendix of claims):

1. (currently amended)
2. (currently amended)
3. (original)
4. (currently amended)
5. (original)
6. (original)
7. (original)
8. (original)

9. (original)
10. (currently amended)
11. (original)
12. (original)
13. (original)
14. (original)
15. (original)
16. (currently amended)
17. (original)
18. (original)
19. (new)
20. (new)
21. (new)
22. (new)
23. (new)
24. (new)

A year later Applicant received a second non-final office action in December 2004. Applicant amended claims in line a telephone communication with Examiner. Examiner and Applicant agreed that claim 1 was distinguished from the prior art Blandenberg. However, we discussed how claim 7 and 13 had to be amended to further distinguish the application from the Blandenberg. As result of the claims status were as follows (See Exhibit 2 in the Appendix of claims):

STATUS OF CLAIMS AFTER SECOND NON-FINAL ACTION

1. (previously presented)
2. (previously presented)
3. (original)
4. (previously presented)
5. (original)
6. (original)
7. (currently amended)
8. (original)
9. (original)
10. (previously presented)
11. (original)
12. (original)
13. (currently amended)
14. (original)
15. (original)
16. (previously presented)
17. (original)
18. (original)
19. (previously presented)
20. (previously presented)
21. (previously presented)
22. (previously presented)
23. (previously presented)

24. (previously presented)

STATUS OF CLAIMS AFTER FINAL ACTION (Exhibit 3)

1. (previously presented)
2. (previously presented)
3. (original)
4. (previously presented)
5. (original)
6. (original)
7. (currently amended)
8. (original)
9. (original)
10. (previously presented)
11. (original)
12. (original)
13. (currently amended)
14. (original)
15. (original)
16. (previously presented)
17. (original)
18. (original)
19. (previously presented)
20. (previously presented)
21. (previously presented)

22. (previously presented)

23. (previously presented)

24. (previously presented)

IV. STATUS OF AMENDMENTS

As noted above, a year later Applicant received a second non-final office action in December 2004. Applicant amended claims in line a telephone communication with Examiner. Examiner and Applicant agreed that claim 1 was distinguished from the prior art Blandenber. However, we discussed how claim 7 and 13 had to be amended to further distinguish the application from the Blandenber. These amendments were discussed on the phone. These amendments were entered.

Applicant received a final office action on 6/30/2005. The examiner raised new issues in this final office action and should not be allowed to do this. Applicant amendments after final rejection were not entered. These arguments are raised below. This office action was not in line with examiner and applicant prior telephone conversation. Additionally, this office action raised issues that were never discussed in the telephone conversation. Claim 13 was rejected under 35 USC 112. I reviewed the specifications and drawings and determined there were typographical errors in the specifications. I provided that explanation to the examiner in a telephone conversation. Applicant amended the specifications because there was a mislabeling on the drawings of 746, 742, 741, 745 and 7A. I felt that arrow A in drawing 7A needed to be clarified. There were typographical errors in specifications which were changed accordingly Page 9 lines 9-29 and page 10 lines 1-8. The claims presented with the response to the final office action are presented below (See exhibit 3). The

claims were not amended. Only the specification was amended to correct 112 rejection. Applicant reasserted the amendments from the prior office action. (See Exhibit 3).

1. (previously presented)
2. (previously presented)
3. (original)
4. (previously presented)
5. (original)
6. (original)
7. (previously presented)
8. (original)
9. (original)
10. (previously presented)
11. (original)
12. (original)
13. (previously presented)
14. (original)
15. (original)
16. (previously presented)
17. (original)
18. (original)
19. (previously presented)
20. (previously presented)

21. (previously presented)

22. (previously presented)

23. (previously presented)

24. (previously presented)

V. SUMMARY OF CLAIMED SUBJECT MATTER

Referring to FIG 1 -3A, page 4 lines 29-37, and page 5 lines 2-29, a description of independent claim 1 is provided. Because independent claim 19 is a broader claim than claim 1, it is also described in the above listed pages. Independent Claim 1 and 19 discloses a handheld computerized device with an attached compact keyboard. In this embodiment of the present invention, the device consists of a keyboard portion and an electronic portion. The keyboard portion and the electronic housing both have a configuration defined by a top edge, bottom edge, top surface, bottom surface, and a pair of side edges. In this embodiment of the present invention, the top edge of the keyboard portion is hingedly connected to the top edge of the electronic housing. A keypad overlays the top surface of the keyboard portion and a display means overlays the top surface of the electronic housing. A microprocessor is situated inside the electronic housing and is electrically connected to keyboard the portion. The hinge connection between the keyboard portion and the electronic housing allows the keyboard portion to pivot from a closed position into an operable position. When in a closed position the keypad and display means are enclosed in a cavity formed by the closure of the keyboard portion against the electronic housing. To pivot into an operable position, the keyboard portion is pivoted 360 degrees around the longitudinal axis of the electronic housing such that the bottom surface of the keyboard portion becomes parallel to the bottom surface of the electronic housing.

Referring to FIG. 6, and page 8 lines 22-29, a description of independent claim 7 is provided. Independent Claim 7 discloses another embodiment of a handheld computerized device with an attached compact keyboard. In this embodiment of the present invention, the bottom surface of the keyboard portion is permanently affixed to the bottom surface of the electronic housing. In this embodiment the handheld device is

fixed in its operable position. A keypad overlay the top surface of the keyboard portion and a display means overlays the top surface of the electronic housing.

Referring to FIG. 7-7C, and page 9 lines 9-29, and page 10 lines 2-11, a description of claim 13 is provided. Claim 13 discloses another embodiment of a handheld computerized device with an attached compact keyboard. In this embodiment of the present invention, the handheld device consists of a sliding bracket having a pair of guide members integrally coupled to the side edges of the electronic housing. The side edges of the keyboard portion are adapted to slide into the guide members. In this embodiment the handheld device is placed in an operable by sliding the keyboard portion with the bottom surface of the keyboard portion parallel to the bottom surface of the electronic housing.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Applicant is requesting a review of the 103 rejections of claims 1, 2, 19-24, and 7, and 8. Additionally, the 112 rejection of claim 13 needs to be reviewed in this appeal.

VII. ARGUMENT

ISSUE 1: 103 REJECTION OF CLAIM INDEPENDENT CLAIM 1, 2, 7, 8, 19-23.

In my final office action response, Applicant reiterated original response per the telephone interview on December 27, 2004 as follows. In his final office action response, Examiner never discussed FIG. 6C of Brandenburg. Per our telephone conversation, Applicant pointed out the significance of FIG. 6C. Brandenburg is provided in Exhibit 4. Regarding claim 1, Applicant and Examiner agreed that Applicant's claimed invention could be distinguished from Blandenberg. Applicant claims:

a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair

*of side edges, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;*

Blandenberg states:

As device 801 transitions to the open state, display portion 803 hingedly pivots relative to body portion 807 as indicated by arrow 809 in FIG. 6B. In the open state, display screen 815 is adjacent to and visible above thumbboard 805. Fig. 6a shows the closed state and Fig. 6B is still in the closed state to show the transition to FIG. 6C.

As shown in FIG. 6C of Blandenberg, the invention in the prior art keyboard is adjacent to the keyboard in an open state. Blandenberg illustrates in FIG. 6A and 6B that bottom surface of the keyboard and display portion are parallel in a closed state.

Applicant claims the electronic housing having the display and the keyboard portion are parallel in an open state. Thus, the Applicant's invention is distinguished from the prior art. As shown in FIG.'S, 6A, 6B, and 6C, the lower edge of the display is hingedly connected to the top edge of the keyboard housing. As shown in FIG. 1 in the specification, the two top edges are hingedly connected as claimed.

Regarding claim 7, Examiner cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. A factual inquiry whether to combine references must be thorough and searching. A showing of suggestion, teaching or motivation to combine the prior art references is an essential component of an obvious holding. The prior art must suggest a desirability to combine prior art references. (See 277 F3d 1338, 61 USPQ2d 1430 (Fed. Cir 2002)).

Here, examiner noted that Brandenburg does not teach the limitation of the bottom surface being permanently affixed of the keyboard in an operable position. The examiner tried to use Brandenburg to fit the claim limitations of Applicant's invention. However, as noted above Brandenburg does not teach or suggest the configuration as claimed by the applicant. Brandenburg teaches a pivoting of a display into a normal configuration with the display adjacent to the keyboard in an open state. The device in Brandenburg is not hingedly connected as claimed by the Applicant. The hingedly connection between the two top edges facilitates the transitioning of the applicant's device the open state.

Ni illustrates a keyboard affixed to the backside of a notebook computer or gamebox. Ni is new reference traversed by the examiner. Additionally, the Keyboard in Ni is not Parabolic as claimed by the Applicant.

Ni nor Brandenburg discloses hand grips for supporting the hands while typing on the keyboard when the device is in the open state. In Brandenburg in FIG. 6C, a standard keyboard is shown. Thus hand support means on the side is not required. Label 827 in FIG. 6C designates joysticks. By plain definition joysticks are not used

conversation; because these amendments are typographical they could have been taken care of before final office action response. This was never mentioned to me prior to final office action):

- *Labels (746,747) was replaced with 736, 737 to show rib designations. Numerals 746 and 747 were designated as ribs earlier in the application. This is an obvious error that can be amended.*
- *Labels 741 and 742 were changed because their designations are reversed in the drawings. This is an obvious error that can be amended.*
- *More designations were added to FIG. 7A and 7B for clarification and to bring them in line with FIG. 7 and 7C. These designations are taken directly from the drawings 7 and 7C which were disclosed in the original disclosure.*
- *Numeral 765 was changed to 745. Numeral 745 is depicted as bottom surface of the electronic housing in the specifications and drawings. This is an obvious error for amendment.*
- *A description of 7A and 7B was added for clarification for examiner. 7B was changed to 7A. 7A is the closed state. This is an obvious error that can be amended in view of the drawings.*
- *As shown in FIG. 7A, in the closed state the keypad (125) faces the bottom surface of the electronic housing which is also stated in the specifications on Page 10, "After the user is finished using device (700), the keyboard portion (710) is slid into guide members (735, 737) with the keypad (725) facing the bottom surface (~~765~~) (745) of electronic housing*

for hand support means. Thus, there is no motivation to combine Ni and Brandenburg. Additionally, it also follows that there is no motivation to combine Makala as well.

Regarding claims 19-24, the above arguments would follow. As explained above claim 19-24 was added to recapture the claim limitation of the original filed application after the first office action. Applicant amended claim 1 to put the application in a condition of allowance.

ISSUE 2: 112 REJECTION OF CLAIM 13

Claim 13 was amended in the final office action to claim an alternative embodiment of claim 1, wherein the invention is slid into an operable position with the bottom surface of electronic housing (720) and keyboard portion (710) in a parallel position. (See Page10 lines 3-5 and FIG. 7C).

The specifications do more than just mention operable versus closed state. Page 9 lines 9-29 and page 10 lines 1-8 disclose the full process of how the embodiment of claim 13 functions. There are some typographical errors between the FIG.'S 7A-7C and the specifications. The disclosure can be amended to matter that is inherently disclosed by the original application. *(See In re Smyte, 480 F.2d 1376, 178 USPQ 279 (C.C.P.A))* As a result, applicant has amended the specifications to be in line with the drawings which are part of the original disclosure. Examiner alleges that the specifications fail to convey to one skilled in the art. Applicant has amended FIG 7A and 7B with labels in line with FIG 7 and FIG. 7C. Applicant provided original drawing of FIG. 7C with response to Office Action for clarification. The specification was amended as follows (Please note that examiner and applicant discussed these changes in a telephone

(720)" As shown in the operable state in FIG. 7B, keypad 125 does not face the bottom surface of the electronic housing. However, Applicant can change wording to state a parallel configuration which is also depicted in FIG. 7A if required by the examiner.

Drawings are considered part of the specifications. *(See Was-Cath, Inc v. Mahurkar, 935 F2d 1555, 19 USPQ2d 1111, 1118 (Fed. Cir. 1991)).* Fig.'s 7A-7C illustrates the configuration of operable and closed state of this embodiment of the present invention. The language of claim 13 comes directly from the specifications in conjunction with the drawings. It is not clear what examiner means by the specification do not reasonably convey to one skilled in the art. Clarification is required because the drawings are clear. The description does not require literal support for the claimed invention. The disclosure should convey the concept that is claimed. *(See Ex Parte Parks 30 USPQ2d 1234, 1246-27 (B.P.A.I 1993))*

Here, the drawings do provide the concept of the claimed invention. The changes to the specifications to bring them in line with drawings are appropriate changes.

Applicant ask board to take note that the first examiner allowed the claims and the applicant amended in line with the first office action. See Office Action in Exhibit 5. Additionally, it took the patent office another year to respond and reject the claims. See Exhibit 6. Blandenburg does not function as the applicant invention.

VIII. APPENDIX A OF CLAIMS INVOLVED IN THIS APPEAL

- Exhibit 1 – First non-final Office Action amendment with claims
Exhibit 2- Second non-final Office Action Amendment with Claims
Exhibit 3- Final Office Action Response with Claims

IX. EVIDENCE APPENDIX B

- Exhibit 4 – Brandenburg Patent with drawings at issue
Exhibit 5 – First Non-final Office Action
Exhibit 6—Second non-final office action

IX. RELATED PROCEEDINGS APPENDIX

NONE.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF : SANG MIN LEE

Serial No.: 09/940,210

Filed: 08/28/2001

Group Art Unit: 2674

Title: COMPACT KEYBOARD FOR HANDHELD COMPUTER

Examiner: Francis Nguyen

AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Honorable Sir:

This amendment is filed in response to the office action dated August 28, 2001.

IN THIS CLAIMS

1. (currently amended): A handheld computerized device comprising:
a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base; an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;
a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands

are supported while the user is typing on the keypad;
a means for displaying data overlaying the top surface of the electronic housing; and
a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby data entered at the keypad is transmitted to the processor and displayed by the display means[.];
a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

2. (currently amended): The device recited in Claim 1, wherein the keypad further comprises:
[a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;]
the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.
3. (original): The device recited in Claim 1, wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
4. (currently amended): The device recited in Claim 3 wherein the display area is a Liquid [Crystals] Crystal Display (LCD).
5. (original): The device recited in Claim 3, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and

a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

6. (original): The device recited in Claim 1, further comprising:

a pressure sensitive writing means for allowing data to be inputted via handwriting; and
the pressure sensitive writing means overlapping the bottom edge of the display area.

7. (original): A handheld computerized device comprising:

a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;

an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard portion;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;

a means for displaying data overlaying the top surface of the electronic housing; and

a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.

8. (original): The device recited in Claim 7, wherein the keypad further comprises:

a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;

the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and

the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

9. (original): The device recited in Claim 7, wherein the display means further comprises:

a display area defined by a top edge, bottom edge, and a pair of side edges;

- a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
10. (currently amended): The device recited in Claim 9 wherein the display area is a Liquid [Crystals] Crystal Display (LCD).
11. (original): The device recited in Claim 10, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
12. (original): The device recited in Claim 7, further comprising:
a pressure sensitive writing means for allowing data to be inputted via handwriting; and
the pressure sensitive writing means overlapping the bottom edge of the display area.
13. (original): A handheld computerized device comprising:
a sliding bracket having a pair of guide members;
a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being adapted to slide into the pair of guide members, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being integrally coupled to the pair of guide members;
a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
a means for displaying data overlaying the top surface of the electronic housing; and
a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.

14. (original): The device recited in Claim 13, wherein the keypad further comprises:
a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand;
15. (original): The device recited in Claim 13, wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
16. (currently amended): The device recited in Claim 15 wherein the display area is a Liquid [Crystals] Crystal Display (LCD).
17. (original): The device recited in Claim 15, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
18. (original): The device recited in Claim 13, further comprising:
a pressure sensitive writing means for allowing data to be inputted via handwriting; and
the pressure sensitive writing means overlapping the bottom edge of the display area.
19. (new): A handheld computerized device comprising:
a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;

an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;
a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad; and.

20. (new): The device recited in Claim 19, wherein the keypad further comprises:

a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

21. (new): The device recited in Claim 19 wherein the display means further comprises:

a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, securely attached to each corresponding strip of the display area.

22. (new): The device recited in Claim 3 wherein the display area is a Liquid Crystal Display (LCD).

23. (new): The device recited in Claim 3 wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal

- upon depression thereof; and
- a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
24. (new): The device recited in Claim 1, further comprising:
- a pressure sensitive writing means for allowing data to be inputted via handwriting; and
- the pressure sensitive writing means overlapping the bottom edge of the display area.

REMARKS

AMENDMENTS

1. REGARDING CLAIMS 4, 10, and 16

The word **CRYSTALS** is misspelled. The correct interpretation of **LCD** is Liquid Crystal Display. Each claim was corrected accordingly.

2. REGARDING CLAIMS 1 AND 2

Per our telephone interview, in order to place claims 1-6 in a condition for allowance, the first two limitations of claim 2 was moved up into claim 1. The last two claim limitations were remained in claim 2.

ARGUMENTS

3. REGARDING ORIGINAL CLAIM 1

Genest discloses a latch and a hook to fasten the two portions of the handheld device together. Fastening means is normally defined as some type of structure that holds two separate structures together such as screw or latch and a hook. The applicant's claim invention discloses a hand support means for supporting the left and right hand while typing on the keypad. When the word "whereby" and its accompanying phrase set forth a structural limitation for the invention recited in the claim, the word "whereby" and the accompanying phrase will be considered a positive limitation of the claim and thereby limit the claim accordingly. (See *Scheinman v Zalkind*, 112 F.2d 1017, 1019, 46 USPQ 141, 143 (C.C.P.A 1940)). The Genest disclosed fastening means does not provide a structure to for hand support means. Your fingers are required to connect and dislodge the latch and hook. However, technically the fastener does not provide hand support. The applicant describes hand support means as a structure required to support the hands during typing. (See Page 8 Lines 23-29 and Page 9 Lines 1-5 in the specifications) The Genest disclosed fastening means is not structurally or functionally equivalent to the disclosed hand support means. Since the Genest disclosed fastening means is not an

Exhibit 2

03-24-05

2674



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: SANG MIN LEE

Serial No.: 09/940,210

Group Art Unit: 2674

Title: COMPACT KEYBOARD FOR HANDHELD COMPUTER

Examiner: DUC Q DINH

AMENDMENT

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Honorable Sir:

This amendment is filed in response to the office communication dated 3/3/2005. I have added claims 19-24. I have enclosed the fee for \$5.00.

IN THE CLAIMS

1. (Previously Presented) A handheld computerized device comprising:
 - a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
 - an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;
 - a pair of hand support means being securely attached at an ergonomic position along

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each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
a means for displaying data overlaying the top surface of the electronic housing; and
a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby data entered at the keypad is transmitted to the processor and displayed by the display means; and
a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

2. (Previously Presented) The device recited in Claim 1, wherein the keypad further comprises:

~~a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;~~
~~the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;~~

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and

the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

3. (original) The device recited in Claim 1, wherein the display means further comprises:

a display area defined by a top edge, bottom edge, and a pair of side edges;

a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and

each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.

4. (Previously Presented) The device recited in Claim 3 wherein the display area is a Liquid Crystals Crystal Display (LCD).

5. (original) The device recited in Claim 3, wherein the bottom strip and each side strip of the front panel further comprises:
- a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
 - a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
6. (original) The device recited in Claim 1, further comprising:
- a pressure sensitive writing means for allowing data to be inputted via handwriting;
 - and
 - the pressure sensitive writing means overlapping the bottom edge of the display area.
7. (currently amended) A handheld computerized device comprising:
- a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
 - an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard portion in an operable position;
 - a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
 - a means for displaying data overlaying the top surface of the electronic housing; and
 - a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.
8. (original) The device recited in Claim 7, wherein the keypad further comprises:
- a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
 - the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

- the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
- the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.
9. (original) The device recited in Claim 7, wherein the display means further comprises:
- a display area defined by a top edge, bottom edge, and a pair of side edges;
 - a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
 - each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
10. (Previously Presented) The device recited in Claim 9 wherein the display area is a Liquid Crystals Crystal Display (LCD).
11. (original) The device recited in Claim 10, wherein the bottom strip and each side strip of the front panel further comprises:
- a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
 - a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
12. (original) The device recited in Claim 7, further comprising:
- a pressure sensitive writing means for allowing data to be inputted via handwriting;
 - and
 - the pressure sensitive writing means overlapping the bottom edge of the display area.
13. (currently amended) A handheld computerized device comprising:
- a sliding bracket having a pair of guide members;
 - a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being adapted to slide into the pair of guide members in an operable state or in a closed state, the keypad overlaying the top surface of the support base;
 - an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being integrally coupled to the pair of guide members;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
in the operable state, the side edges of the support base are adapted to slide into the guide members such that the bottom surface of the support base and the bottom surface of the electronic housing are parallel to each other;
in the closed state, the side edges of the support base are adapted to slide into the guide members such that the keypad faces the top surface of the electronic housing;
a means for displaying data overlaying the top surface of the electronic housing; and
a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.

14. (original) The device recited in Claim 13, wherein the keypad further comprises:
a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand;
15. (original) The device recited in Claim 13, wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
16. (Previously Presented) The device recited in Claim 15 wherein the display area is a Liquid Crystals Crystal Display (LCD).
17. (original) The device recited in Claim 15, wherein the bottom strip and each side strip of the

front panel further comprises:

a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and

a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

18. (original) The device recited in Claim 13, further comprising:

a pressure sensitive writing means for allowing data to be inputted via handwriting; and

the pressure sensitive writing means overlapping the bottom edge of the display area.

19. (Previously Presented) A handheld computerized device comprising:

a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;

an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad.

20. (Previously Presented): The device recited in Claim 19, wherein the keypad further comprises:

a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas,

the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and

the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

21. (Previously Presented) The device recited in Claim 19 wherein the display means further comprises:

- a display area defined by a top edge, bottom edge, and a pair of side edges;
- a front panel surrounding the display area and being defined by a top strip, a bottom strip, securely attached to each corresponding strip of the display area.

22. (Previously Presented): The device recited in Claim 21 wherein the display area is a Liquid Crystal Display (LCD).

23. (Previously Presented): The device recited in Claim 21 wherein the bottom strip and each side strip of the front panel further comprises:

- a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof;
- a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

24. (Previously Presented) The device recited in Claim 19 further comprising :

- a pressure sensitive writing means for allowing data to be inputted via handwriting; and
- the pressure sensitive writing means overlapping the bottom edge of the display area.

IN THE CLAIMS

1. (Previously Presented) A handheld computerized device comprising:
- a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
 - an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;
 - a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
 - a means for displaying data overlaying the top surface of the electronic housing; and
 - a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby data entered at the keypad is transmitted to the processor and displayed by the display means; and
 - a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
 - the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

2. (Previously Presented) The device recited in Claim 1, wherein the keypad further comprises:

~~a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;~~
~~the first and the second section lying co-planar vertically parallel along the top surface~~

- ~~of the support base of the keyboard portion;~~
the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.
3. (original) The device recited in Claim 1, wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
4. (Previously Presented) The device recited in Claim 3 wherein the display area is a Liquid ~~Crystals~~ Crystal Display (LCD).
5. (original) The device recited in Claim 3, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
6. (original) The device recited in Claim 1, further comprising:
a pressure sensitive writing means for allowing data to be inputted via handwriting;
and
the pressure sensitive writing means overlapping the bottom edge of the display area.
7. (currently amended) A handheld computerized device comprising:
a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard portion in an operable position;

- a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
- a means for displaying data overlaying the top surface of the electronic housing; and
- a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.
8. (original) The device recited in Claim 7, wherein the keypad further comprises:
- a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
 - the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
 - the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
 - the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.
9. (original) The device recited in Claim 7, wherein the display means further comprises:
- a display area defined by a top edge, bottom edge, and a pair of side edges;
 - a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
 - each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
10. (Previously Presented) The device recited in Claim 9 wherein the display area is a Liquid Crystals Crystal Display (LCD).
11. (original) The device recited in Claim 10, wherein the bottom strip and each side strip of the front panel further comprises:
- a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
 - a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.

12. (original) The device recited in Claim 7, further comprising:
a pressure sensitive writing means for allowing data to be inputted via handwriting;
and
the pressure sensitive writing means overlapping the bottom edge of the display area.
13. (currently amended) A handheld computerized device comprising:
a sliding bracket having a pair of guide members;
a keyboard portion having a support base and a keypad, the support base including a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being adapted to slide into the pair of guide members in an operable state or in a closed state, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration with a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the pair of side edges being integrally coupled to the pair of guide members;
a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad;
in the operable state, the side edges of the support base are adapted to slide into the guide members such that the bottom surface of the support base and the bottom surface of the electronic housing are parallel to each other;
in the closed state, the side edges of the support base are adapted to slide into the guide members such that the keypad faces the top bottom surface of the electronic housing
a means for displaying data overlaying the top surface of the electronic housing; and
a processor situated within the electronic housing, the processor electrically connected to the display means and the keyboard portion whereby the data entered at the keypad is transmitted to the processor and displayed by the display means.
14. (original) The device recited in Claim 13, wherein the keypad further comprises:
a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas;
the first and second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;

- the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
- the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand;
- 15.(original) The device recited in Claim 13, wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and
each edge of the display area lying adjacent to and being securely attached to each corresponding strip of the display area.
- 16.(Previously Presented) The device recited in Claim 15 wherein the display area is a Liquid Crystals Crystal Display (LCD).
- 17.(original) The device recited in Claim 15, wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof; and
a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
- 18.(original) The device recited in Claim 13, further comprising:
a pressure sensitive writing means for allowing data to be inputted via handwriting;
and
the pressure sensitive writing means overlapping the bottom edge of the display area.
19. (Previously Presented) A handheld computerized device comprising:
a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;
an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the

bottom surface of the electronic housing is parallel to the bottom surface of the support base;

a pair of hand support means being securely attached at an ergonomic position along each side edge of the electronic housing, whereby a user's left hand or right hand or both hands are supported while the user is typing on the keypad.

20. (Previously Presented): The device recited in Claim 19, wherein the keypad further comprises:
a first and a second section having a plurality of alphanumeric keys each adapted to generate a character signal upon depression thereof, each section being in the form of complementary symmetrical or asymmetrical parabolas,
the first and the second section lying co-planar vertically parallel along the top surface of the support base of the keyboard portion;
the first section of the keypad being arranged in the standard QWERTY keyboard format for the left hand; and
the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.
21. (Previously Presented) The device recited in Claim 19 wherein the display means further comprises:
a display area defined by a top edge, bottom edge, and a pair of side edges;
a front panel surrounding the display area and being defined by a top strip, a bottom strip, securely attached to each corresponding strip of the display area.
22. (Previously Presented): The device recited in Claim 21 wherein the display area is a Liquid Crystal Display (LCD).
23. (Previously Presented): The device recited in Claim 21 wherein the bottom strip and each side strip of the front panel further comprises:
a plurality of additional alphanumeric keys each adapted to generate a character signal upon depression thereof;
a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor.
24. (Previously Presented) The device recited in Claim 19 further comprising :
a pressure sensitive writing means for allowing data to be inputted via handwriting; and
the pressure sensitive writing means overlapping the bottom edge of the display area.

ARGUMENTS

I am reiterating my original response per our telephone interview on December 27, 2004 as follows. In his response, Examiner never discussed FIG. 6C of Brandenburg. Per our telephone conversation, I pointed out the significance of FIG. 6C.

Regarding claim 1, we agreed that Applicant's claimed invention could be distinguished from Blandenbergl. Applicant claims:

a keyboard portion having a support base and a keypad, the support base defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the keypad overlaying the top surface of the support base;

an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base such that the electronic housing can pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base;

Blandenbergl states:

As device 801 transitions to the open state, display portion 803 hingedly pivots relative to body portion 807 as indicated by arrow 809 in FIG. 6B. In the open state, display screen 815 is adjacent to and visible above thumbboard 805. Fig. 6a shows the closed state and Fig. 6B is still in the closed state to show the transition to FIG. 6C.

As shown in FIG. 6C, the invention in the prior art keyboard is adjacent to the keyboard in an open state. The prior illustrates in FIG. 6A and 6B that bottom surface of the keyboard and display portion are parallel in a closed state. However, applicant claims the electronic housing

having the display and the keyboard portion are parallel in an open state. Thus, the Applicant's invention is distinguished from the prior art. As shown in FIG.'S, 6A, 6B, and 6C, the lower edge of the display is hingedly connected to the top edge of the keyboard housing. As shown in FIG. 1 in the specification, the two top edges are hingedly connected as claimed.

Regarding independent claim 7, claim 7 was amended to claim an alternative embodiment of claim 1, wherein the invention is affixed into an operable position with the bottom surface of electronic housing (620) and keyboard portion (610) in a parallel position. (See Page 8 line 8-16 and FIG. 6)

Regarding independent claim 13, claim 13 was amended to claim an alternative embodiment of claim 1, wherein the invention is slid into an operable position with the bottom surface of electronic housing (720) and keyboard portion (710) in a parallel position. (See Page 10 lines 3-5 and FIG. 7C).

112 REJECTION OF CLAIM 13

The specifications do more than just mention operable versus closed state. The Page 9 lines 9-29 through page 10 lines 1-8 discloses the full process. There are some typographical errors between the FIG.'S 7A-7C and the specifications. The disclosure can be amended to matter that is inherently disclosed by the original application. (*See In re Smyte, 480 F.2d 1376, 178 USPQ 279 (C.C.P.A.)*) As a result, applicant has amended the specifications to be in line with the drawings which are part of the original disclosure. Examiner alleges that the specifications fail to convey to one skilled in the art. Applicant has amended FIG 7A and 7B with labels in line with FIG 7 and FIG. 7C. Applicant has provided FIG. 7C for clarification. The specification was amended as follows (Please note that examiner and applicant discuss

these changes in a telephone conversation; these amendments could have been taken care of before final office action response):

- label (746,747) was replaced with 736, 737 to show rib designations. 746, 747 was designated as ribs earlier in the application. This is an obvious error that can be amended.
- labels 741 and 742 was changed because their designation are reversed in the drawings. This is an obvious error that can be amended.
- More designations were added to FIG. 7A and 7B for clarification and to bring them in line with FIG. 7 and 7C. These designations are taken directly from the drawings 7 and 7C which were disclosed in the original disclosure.
- 765 was changed to 745. 745 is depicted as bottom surface of the electronic housing in the specifications and drawings. This is an obvious error for amendment.
- a description of 7A and 7B was added for clarification for examiner. 7B was changed to 7A. 7A is the closed state. This is an obvious error that can be amended in view of the drawings.
- Claim 13 was amended for examiner clarification. As shown in FIG. 7A, in the closed state the keypad (125) faces the bottom surface of the electronic housing which is also stated in the specifications on Page 10, "*After the user is finished using device (700), the keyboard portion (710) is slid into guide members (735, 737) with the keypad (725) facing the bottom surface ~~(765)~~ (745) of electronic housing (720)*" As shown in the operable state in FIG. 7B, keypad 125 does not face the bottom surface of the electronic housing. However,

Applicant can change wording to state a parallel configuration which is also depicted in FIG. 7A if required by the examiner.

Drawings are considered part of the specifications. (*See Was-Cath, Inc v. Mahurkar, 935 F2d 1555, 19 USPQ2d 1111, 1118 (Fed. Cir. 1991)*). Fig.'s 7A-7C illustrates the configuration of operable and closed state of this embodiment of the present invention. The language of claim 13 comes directly from the specifications in conjunction with the drawings. It is not clear what examiner means by the specification do not reasonably convey to one skilled in the art. Clarification is required because the drawings are clear. The description does not require literal support for the claimed invention. The disclosure should convey the concept that is claimed. (*See Ex Parte Parks 30 USPQ2d 1234, 1246-27 (B.P.A.I 1993)*) *Here, the do drawings provide the concept of the claimed invention.*

103 REJECTIONS

Examiner cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. A factual inquiry whether to combine references must be thorough and searching. A showing of suggestion, teaching or motivation to combine the prior art references is an essential component of an obvious holding. The prior art must suggest a desirability to combine prior art references. (See 277 F3d 1338, 61 USPQ2d 1430 (Fed. Cir 2002)).

Here, the examiner tried to use Brandenburg to fit the claim limitations of Applicant. However, Brandenburg does not teach or suggest the configuration as claimed by the applicant. Brandenburg teaches a pivoting of a display into a normal configuration with the display adjacent to the keyboard in an open state. The device in Brandenburg is not hingedly

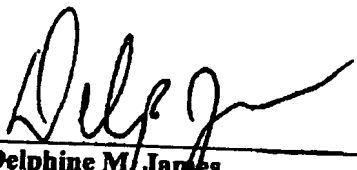
connected as claimed by the Applicant. The hingedly connection between the two top edges facilitates the transitioning of the applicant's device the open state.

Ni illustrates a backside keyboard for a notebook computer or gamebox. Ni is new reference traversed by the examiner. Additionally, the Keyboard in Ni is not Parabolic and is not hingedly connected as claimed by the Applicant.

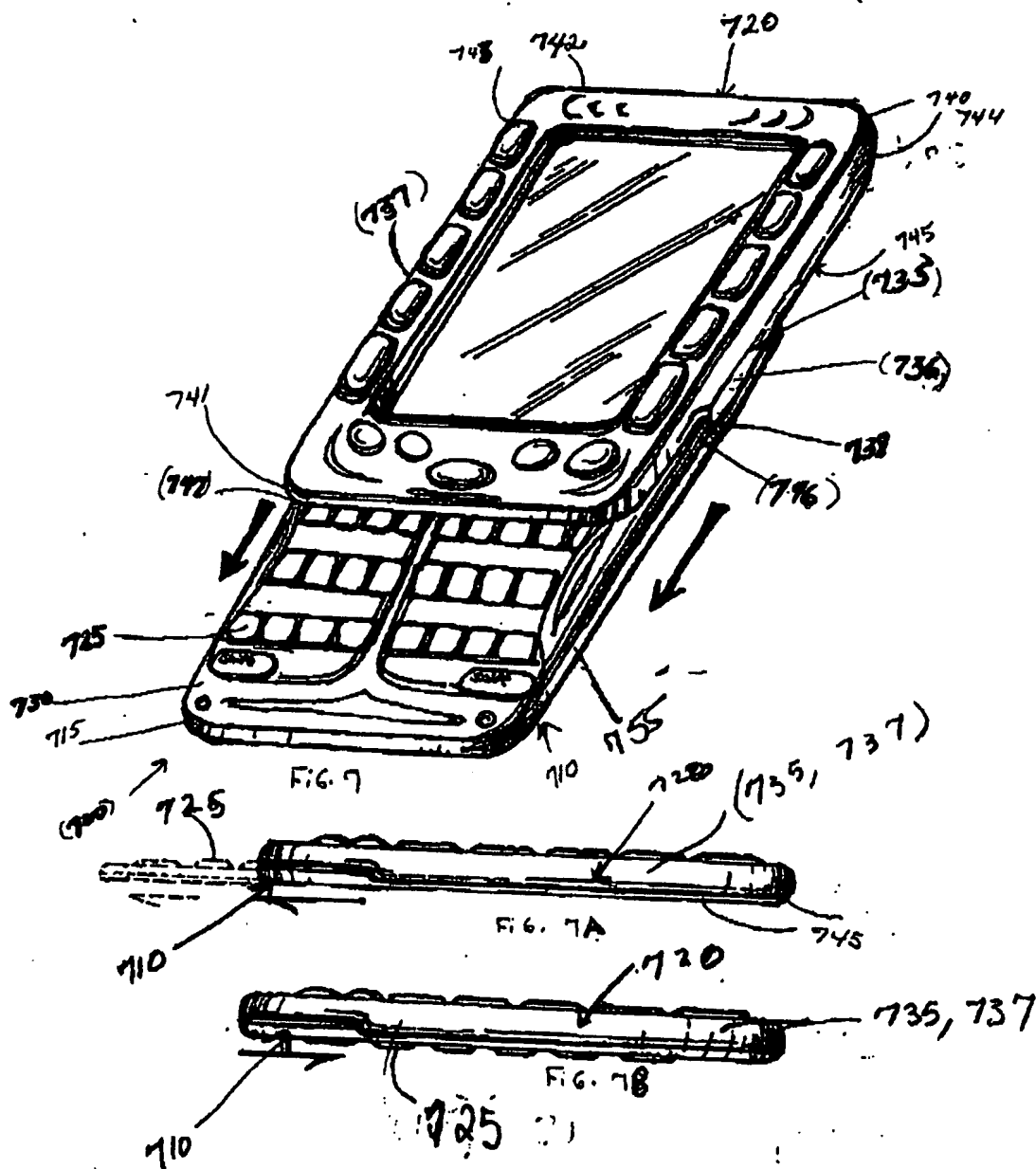
Ni nor Brandenburg discloses hand grips for supporting the hands while typing on the keyboard when the device is in the open state. In Brandenburg in FIG. 6C, a standard keyboard is shown. Thus hand support means on the side is not required. Label 827 in FIG. 6C designates joysticks. By plain definition joysticks are not used for hand support means. Thus, there is no motivation to combine Ni and Brandenburg. Additionally, it also follows that there is no motivation to combine Makala as well.

Examiner is reminded that Applicant has amended independent claims 7 and 13 to further distinguish with the prior art. In view of the above amendments to independent claims 7 and 13 and supporting argument to claim 1, Applicant respectfully requests that the rejections to the supporting dependent claims be withdrawn. Alternately should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, he/she is invited to telephone the undersigned.

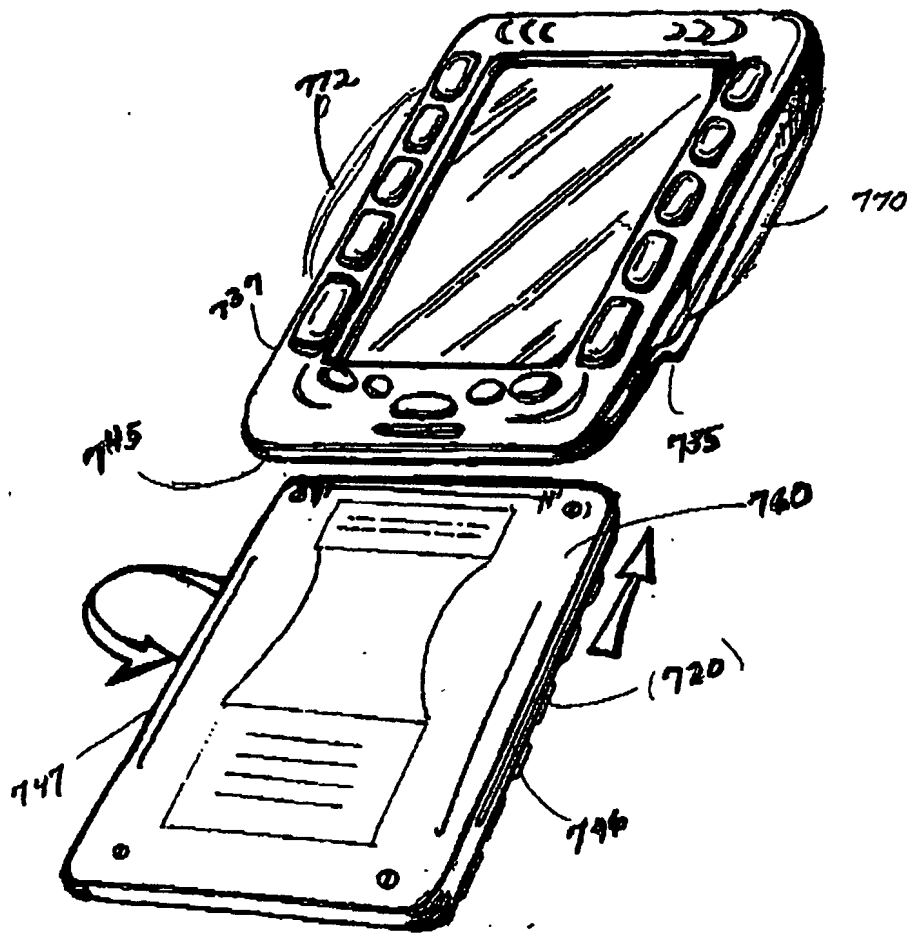
Respectfully submitted:


Delphine M. James

Replacement
Sheet



Replacement
Sheet



Office Action Summary

Application No.

09/940,210

Applicant(s)

LEE, SANG MIN

Examiner

FRANCIS NGUYEN

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
 Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) NONE is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9-13 and 15-18 is/are rejected.
- 7) ☐ Claim(s) 2,8 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Draft

5850
703-746-7850
Straight to
Computer

Page 2

DETAILED ACTION

Claim Objections

1. Claims 4, 10, 16 are objected to because of the following informalities: incorrect word "Crystals" in claim 4(page 4, line 5), claim 10(page 13, line 16), claim 16 (page 14, line 29).
Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-7, 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Genest et al. (US Patent 6,480,377) in view of Price et al. (US Patent 6,377,444).

→ D. 17
(original)
copy

As to claim 1) Genesis et al. teaches a handheld computerized device (handheld computer 12 shown in figure 1, column 7, lines 50-54) comprising:
a keyboard portion having a support base and a keypad (keyboard 20 and support base shown in figure 1, column 7, lines 34-36, plurality of individual keys 58 shown in figure 3),
an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges, the front edge of the electronic housing being hingedly coupled to the front edge of the support base (housing of handheld computer 12 shown in figure 1, hinge structure 17, column 7, lines 15-16)

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a pair of hand support means (latch hook 60 and hook receiving member 62, column 14, lines 28-32)

a means for displaying data (screen 32, column 8, lines 12-14)

a processor situated within the electronic housing (computer processor 30, column 8, lines 1-3)

However, Genest et al. fails to teach electronic housing pivot from a closed position into an open position wherein the bottom surface of the electronic housing is parallel to the bottom surface of the support base. Price et al. teaches hinged housings for electronic devices (see abstract), with first body portion and second body portion for rotation at an angle greater than 180 degrees from the mounting surface (column 3, lines 15-18) . It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of Genest et al. then modify the electronic housing to pivot from a closed position to an open position for more than 180 degrees as taught by Price et al. to obtain the apparatus Genest et al. modified by Price et al. because it would allow user to have multiple configurations , as taught by Price et al. (column 5, lines 35-36).

*Teaches rotating → (affixed)
into multiple into a
config configuration*

As to claim 3, the device recited in claim 1, wherein the display means further comprises: a display area defined by a top edge, bottom edge, and a pair of side edges (Genest et al., screen 32, column 8, lines 3-4) ; a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and each edge of the display lying adjacent to and being securely attached to each corresponding strip of the display area (inherent on front side 26 shown on figure 1, for supporting LCD screen 32).

As to claim 4, the device recited in claim 3 wherein the display area is a Liquid Crystal Display (Genest et al., column 8, lines 13-14).

As to claim 5, the device recited in claim 3, wherein the bottom strip and each side strip of the front panel further comprises a plurality of additional alphanumeric keys (Genest et al., keys 58 and switches 56, column 11, lines 7-8) each adapted to generate a character signal upon depression thereof; and a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor (data port and data connector, column 11, lines 13-15).

As to claim 6, the device recited in claim 1, further comprising a pressure sensitive writing means for allowing data to be inputted via handwriting (Genest et al., column 8, lines 15-17 column 11, lines 58-64).

As to claim 7, Genesis et al. teaches a handheld computerized device (handheld computer 12 shown in figure 1, column 7, lines 50-54) comprising:
a keyboard portion having a support base and a keypad (keyboard 20 and support base shown in figure 1, column 7, lines 34-36) plurality of individual keys 58 shown in figure 3),
an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges (housing of handheld computer 12 shown in figure 1)

a pair of hand support means (latch hook 60 and hook receiving member 62, column 14, lines 28-32) *rest of claim unstaten*

a means for displaying data (screen 32, column 8, lines 12-14)

a processor situated within the electronic housing (computer processor 30, column 8, lines 1-3)

However, Genest et al. fails to teach bottom surface of the electronic housing being securedly attached to the bottom surface of the keyboard portion . Note that Genest et al. does teach a hinge structure 17 (column 7, lines 15-16); this would allow pivoting. It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of Genest et al. then make use of the hinge for pivoting resulting in bottom surface of the electronic housing attached to the bottom surface of the keyboard portion to obtain the apparatus Genest et al. modified because it would allow different configurations for user. 3

As to claim 9, the device recited in claim 7, wherein the display means further comprises: a display area defined by a top edge, bottom edge, and a pair of side edges (Genest et al., screen 32, column 8, lines 3-4) ; a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and each edge of the display lying adjacent to and being securely attached to each corresponding strip of the display area (inherent on front side 26 shown on figure 1, for supporting LCD screen 32).

As to claim 10, the device recited in claim 7 wherein the display area is a Liquid Crystal Display (Genest et al., column 8, lines 13-14).

As to claim 11, the device recited in claim 9, wherein the bottom strip and each side strip of the front panel further comprises a plurality of additional alphanumeric keys (Genest et al., keys 58 and switches 56, column 11, lines 7-8) each adapted to generate a character signal upon depression thereof; and a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor (data port and data connector, column 11, lines 13-15) .

As to claim 12, the device recited in claim 7, further comprising a pressure sensitive writing means for allowing data to be inputted via handwriting (Genest et al., column 8, lines 15-17 column 11, lines 58-64).

Claims 13, 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Genest et al. (US Patent 6,480,377) in view of Allgeyer et al. (US Patent 6,477,042)

As to claim 13, Genesis et al. teaches a handheld computerized device (handheld computer 12 shown in figure 1, column 7, lines 50-54) comprising:

a keyboard portion having a support base and a keypad (keyboard 20 and support base shown in figure 1, column 7, lines 34-36) plurality of individual keys 58 shown in figure 3),

an electronic housing having a configuration defined by a top surface, a bottom surface, a rear edge, a front edge, and a pair of side edges (housing of handheld computer 12 shown in figure

1)

a pair of hand support means (latch hook 60 and hook receiving member 62, column 14, lines 28-32)

a means for displaying data (screen 32, column 8, lines 12-14)

a processor situated within the electronic housing (computer processor 30, column 8, lines 1-3)

However, Genest et al. fails to teach sliding brackets having a pair of guide members. Allgeyer et al. teaches a sliding bracket with rails (column 11, lines 55-57). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of Genest et al. then make use of sliding brackets with guide members as taught by Allgeyer to obtain the apparatus Genest et al. modified by Allgeyer et al. because it would allow ease of assembling/disassembling , as taught by Allgeyer (column 11, lines 56-57) and also user can easily change configuration.

As to claim 15, the device recited in claim 13, wherein the display means further comprises: a display area defined by a top edge, bottom edge, and a pair of side edges (Genest et al., screen 32, column 8, lines 3-4) ; a front panel surrounding the display area and being defined by a top strip, a bottom strip, and a pair of side strips; and each edge of the display lying adjacent to and being securely attached to each corresponding strip of the display area (inherent on front side 26 shown on figure 1, for supporting LCD screen 32).

As to claim 16, the device recited in claim 15 wherein the display area is a Liquid Crystal Display (Genest et al., column 8, lines 13-14).

As to claim 17, the device recited in claim 15, wherein the bottom strip and each side strip of the front panel further comprises a plurality of additional alphanumeric keys (Genest et al., keys

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58 and switches 56, column 11, lines 7-8) each adapted to generate a character signal upon depression thereof; and a means for electrically connecting the plurality of additional alphanumeric keys to the processor whereby each generated character signal is transmitted to the processor (data port and data connector, column 11, lines 13-15) .

As to claim 18, the device recited in claim 13, further comprising a pressure sensitive writing means for allowing data to be inputted via handwriting (Genest et al., counn 8, lines 15-17 column 11, lines 58-64).

Allowable Subject Matter

4. Claims 2, 8 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. *what about other limitations*

The following is a statement of reasons for the indication of allowable subject matter: As to claims 2, 8 and 14, none of prior art teaches the first section of a keypad arranged in the standard QWERTY keyboard for the left hand, the second section of the keypad being arranged in the standard QWERTY keyboard format for the right hand.

CONCLUSION

5. The prior art made of record not relied upon is pertinent to applicant's disclosure

US Patent Susel 6,111,527

US Patent Tzeng 6,431,776

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service whose telephone number is
(703) 306-0377.

May 16th, 2003



FRANCIS N NGUYEN
Examiner
Art Unit 2674

Office Action Summary

Application No.

09/940,210

Applicant(s)

LEE, SANG MIN

Examiner

DUC Q. DINH

Art Unit

2674

Exhibit 6

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2005.
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-24 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

*pull Ni
*(6,297,752)

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

1. This is response to the Amendment filed on March 23,2005.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 13-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amended claim 13 recites the limitation "in the closed state, the side edges of the support base are adapted to slide into the guide members such that the keypad faces the top surfaces of the electronic housing". Although the specification page 9-10 does mention the arrangement of the electronic device, there is no support in the specification for the quoted limitation above. The examiner examines the application based on best understood of the claimed language.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandenburg et al. (U. S. Patent No. 6,665,173), hereinafter Brandenburg.

In reference to claim 1, Brandenburg discloses in Fig. 6 a handheld computer comprising: keyboard portion 807 having support base and a thumbboard 805 (corresponding to the keyboard) defined by a top surface, a bottom surface, a rear edge, a front edge and a pair of side edges, the thumb board overlaying the top surface of the support base as claimed. An electronic housing 801 having the same structure with the keyboard portion as shown in Fig. 6A. Fig. 6B shows the coupling structure of the keyboard portion and the display portion in an open or closed position such that the bottom surface of the electronic housing is parallel to the bottom surface of the support base as claimed (col. 11, lines 35-53). The device specifically comprising (1) an alphanumeric data input device, such as a full QWERTY-type keyboard or thumb board; (2) a display device, such as an LCD, LED... display screen; (3) a processor; (4) a power source... and (6) a physical housing that contains these components (corresponding to the electronic housing) and that consists of at least two discrete portions that may translate, rotate and/or pivot relative to one another, one portion containing a display device and one portion containing a keyboard (col. 7 line 60 – col. 8 line 5). Fig. 7D show a keyboard having first and second section having plurality of key and being in the form of complementary symmetrical and vertically parallel with the top surface of the keyboard portion.

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In addition, Brandenburg discloses that the system also has a plurality of raised grips 621 (corresponding to the hand support means) may be integrated into protective bumpers 619 to facilitate handling of and interaction with device 601. However, Blandenberg does not disclose the raised grips being attached to a side edge of the display portion of the device. Fig. 5 shows

and touch pad on the backside of the device. The touch pad is located such that it can be utilized by the user while the device is in either closed state or open state (col. 11, lines 16-34)

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to provide the grips of the system to provide the user hand support while using the touchpad in the back of the display as shown in Fig. 5B or holding the device while typing on the keyboard as shown in Fig. 4.

In reference to claim 2, Fig. 7 shows the appropriate standard QWERTY keyboard format on the left and right hand as claimed.

In reference to claims 3, and 21, Fig. 6 A and 6C show the strips surrounding the display which carries the additional input device such as joystick for the system as claimed.

In reference to claims 4 and 22, see the rejection of claim 1 for the LCD display as claimed.

In reference to claims 19 and 20, refer to the rejection as applied to claim 1.

6. Claims 7-10 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blandenbergh in view of Ni (U. S. Patent No. 6,297,752).

In reference to claim 7, refer to the rejection as applied to claim 1. However, Blandenbergh does not disclose, the bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard in an operable position. Ni discloses a backside keyboard for a notebook having bottom surface of the electronic housing being securely attached to the bottom surface of the keyboard as claimed.

It would have been obvious for one of ordinary skill in the art at the time of the invention
was made to learn the teaching of Ni, i.e., the bottom surface of the electronic housing being
securely attached to the bottom surface of the keyboard in an operable position, so that the user
has the same feel of location that occurs when the keyboard is on the top surface of the chassis
thereby eliminating the strain caused by twisting the wrist to type in the state of the art (col. 2,
lines 5-8).

In reference to claims 8-9, refer to the rejection as applied to claims 1-3.

In reference to claim 10, refer to the rejection as applied to claim 4.

In reference to claims 13 and 14, refer to the rejection of claim 1. In addition, Fig. 1-3
show an embodiment in which the keyboard portion and the display portion connected by sliding
means which comprising bracket and guiding members for the system as claimed (see col. 9,
lines 25-45). In addition, Ni shows the bottom surface of the keyboard and the bottom surface of
the electronic housing are parallel to each other.

In reference to claim 15, refer to the rejection as applied to claim 3.

7. Claims 5, 11, 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Blandenburg and Ni in view of Makala et al. (U. S. Patent No. 6,047,196).

In reference to claims 5, 11, 17 and 23, Blandenburg discloses in Fig. 4, plurality of input
devices is provided in the boundary strips around the display device. For examples one boundary
may be indicated by a "-" sign and the opposing end boundary may be indicated by a "+" sign
(col. 10, lines 26-60). However, Blandenburg does not disclose the plurality of additional